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ABSTRACT

Information about the performance of Pennsylvania's public schools in relation to the six national education goals developed by the nation's governors and the Bush Administration at the Charlottesville education summit is provided in this report. Initiatives taken to improve educational quality and plans for further action are described. The first part of the report presents an overview of Pennsylvania education, specifically, data on students, teachers, and state financial support. The second part evaluates the state's progress toward achieving the six national education goals. Each goal is listed along with its subsidiary objectives. Three areas are assessed under each goal: (1) quantitative information that describes Pennsylvania's status relative to the national goals; (2) current efforts under way to address these goals; and (3) future directions being planned or considered. Part 3 identifies the types of actions and roles that families, businesses, and communities are taking. Numerous graphs and tables are included. The appendix presents an overview of Pennsylvania educational governance; it includes an organizational chart and a list of contact individuals and organizations. (LMI)

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Meeting The Challenge

Pennsylvania's Progress Report On Achieving The National Education Goals

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MEETING THE CHALLENGE

September 1991

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Citizens of Pennsylvania:

Two years ago the nation's Governors met with the President in Charlottesville, Virginia, for the historic Education Summit. At that time the Governors agreed on an outline of National Education Goals, against which we would measure our progress for the remainder of this century. Several months later the Governors voted unanimously to adopt the final language of the National Education Goals.

But we did more than that. We promised to be **accountable** for how well each of our states was progressing toward meeting the National Goals. With this first annual Pennsylvania Progress Report, I am fulfilling my promise to the people of this Commonwealth to do just that.

This Pennsylvania Progress Report, which accompanies the release of the National Education Goals Progress Report, contains detailed information about how our schools are performing, what we are doing to improve the quality of education, and what more we expect to do in the future.

If we truly hope to reach the National Education Goals, then we must understand that all Pennsylvanians, every one of us, have a job to do in making it so. Society's needs and demands have grown to the point where schools, alone, cannot do the entire job. All over Pennsylvania we see families, businesses, and communities getting involved to make their schools better. We need to spread the word about these actions, and to encourage others to undertake them as well. That's why this Progress Report also contains a section identifying roles and actions which citizens can take to help us move toward the National Goals.

This Progress Report points out areas of strength and weakness in our educational system. In the years ahead, as we improve our data collection and reporting, the Progress Report will enable us to see clearly how we are faring in our quest to meet the National Goals. In particular, as we move towards the establishment of outcome standards for all students and appropriate assessment strategies, we will be in a position to monitor our progress more effectively.

I urge each of you to study carefully the information contained in the Report and make up your mind to do what you can to ensure that future Reports demonstrate that our schools and our kids are on the right track.

Make no mistake, we are talking about our future as Pennsylvanians and as Americans. Together we can move ahead to meet the National Goals. This Progress Report represents the first step.

Sincerely,


Robert P. Casey

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INTRODUCTION

This First Annual Pennsylvania Progress Report is designed to convey to the citizens of Pennsylvania information on how well we are progressing on our road to achieving the National Education Goals. The document is being issued concurrently with the National Education Goals Progress Report, which contains national-level outcome measures and other direct and indirect indicators toward National Goals attainment.

This Progress Report has three parts. The first part is a straightforward presentation of information and data which depict Pennsylvania education as it exists today, as well as an indication of state funding support for education over the last several years, including some relevant national comparisons.

The second and most expansive portion describes in various ways how Pennsylvania is moving ahead to meet the National Goals. Each goal and its subsidiary objectives are listed. Within each Goal, three sections are included: (1) quantitative information which bears on Pennsylvania's status relative to the National Goals; (2) current efforts underway in Pennsylvania which address the National Goals; and (3) future directions being planned or considered which will result in progress toward the National Goals.

The third part of the Report identifies types of actions and roles which families, businesses, and communities are taking and must continue to take in order for Pennsylvania to address the National Goals.

Finally, included in the appendix is an overview of education governance in Pennsylvania. This information is important because in order to get involved in improving our education system, our citizens need to have some understanding of how it works and who is responsible. Also included in this appendix is a chart depicting the relationships of the key actors in education governance, as well as names and addresses of important organizations and individuals so that citizens may inquire about how to get involved in improving the education system.

It is important to note that current data are simply inadequate in many instances to constitute true indicators of progress. This fact was recognized early by the National Education Goals Panel, the group of Governors and White House representatives which decided on the data which will be included in the National Progress Report. However, while the present data are less than full measures of progress, we believe that they provide a reasonable indication of our status. In the future, it will be necessary to identify and to collect data which more precisely relate to the outcomes and objectives of the National Education Goals, while at the same time maintaining some consistency so that information is compatible and comparable over time. To help with the development of improved data collection and analysis, a working group of Pennsylvanians with interest and expertise in these issues will be empaneled to address these issues in the coming months. Future reports will demonstrate significant improvement in data collection and reporting.

It is also important to point out that this report focuses almost entirely on programs, activities, and data which reflect state and federal activity. This is an admittedly limited view. Groups and individuals all over the Commonwealth are taking steps which will move us toward attainment of the Goals. In future reports outstanding examples of these efforts will be included, as well.

PART I:

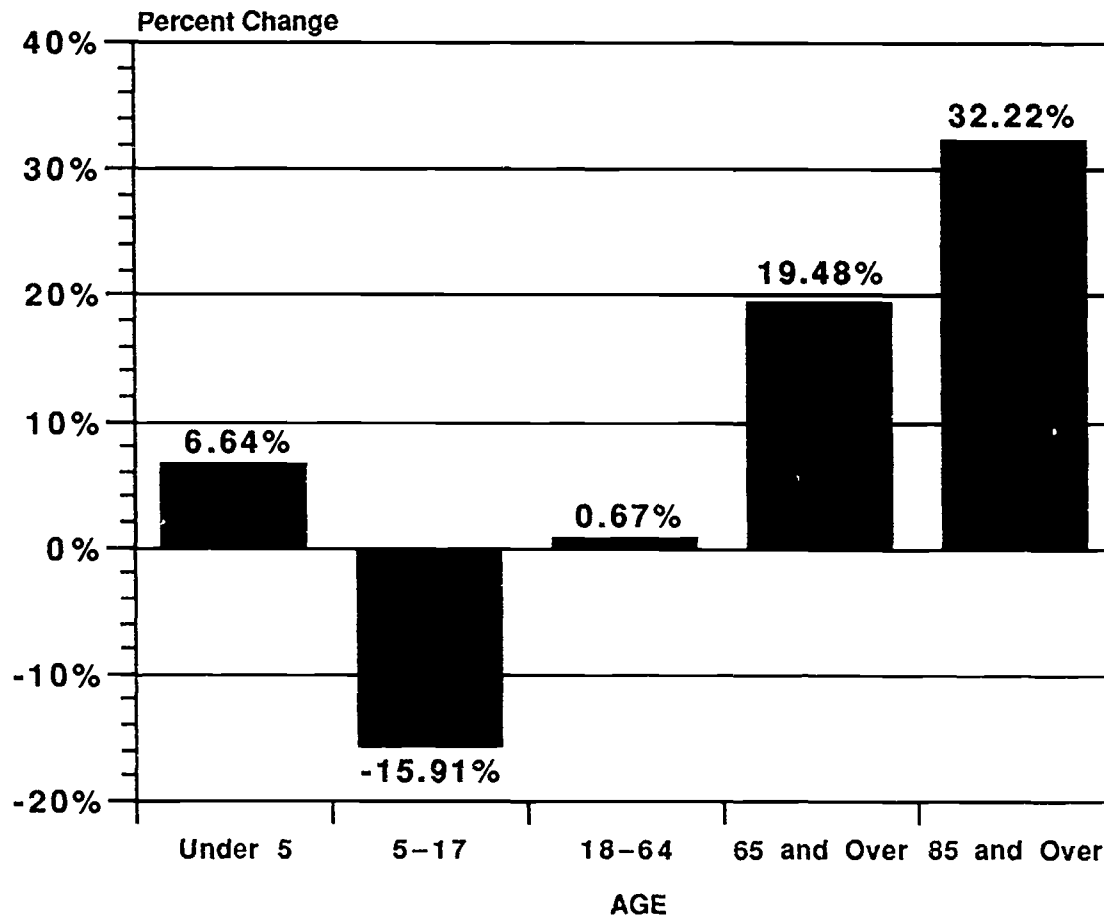
PENNSYLVANIA EDUCATION AT A GLANCE

This section contains basic and general information about students and teachers in Pennsylvania public schools. Included are charts, tables, and narrative which describe changing age cohorts, enrollments in elementary, secondary, and higher education institutions, and enrollments in programs such as vocational and special education. Also included are graphs describing state funding for basic and higher education over the last five years, as well as a picture of the declining percentage of federal support and a comparison of U.S. spending percentages for education with those of other industrialized nations.

DATA ON STUDENTS, TEACHERS, AND SCHOOLS

Pennsylvania Population by Age Group

Percent Change 1980-1990

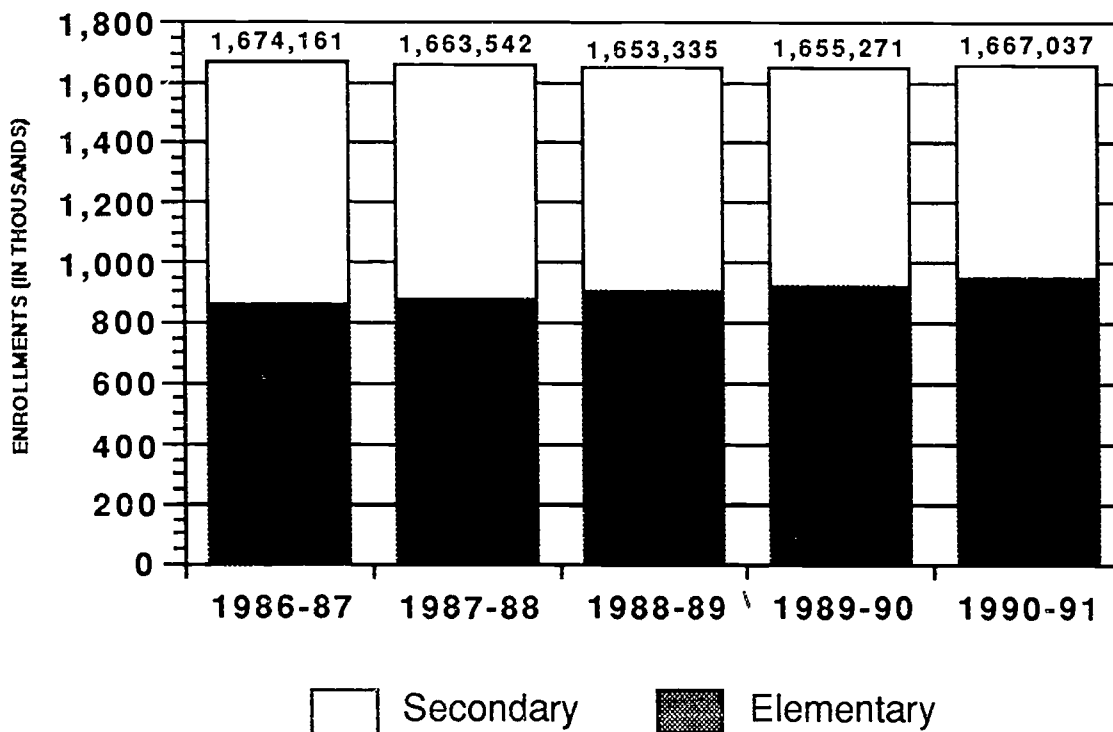


PennState Data Center

Population by Age Group

The decade of the 1980s saw significant declines in the number and proportion of children in the 5-17 age cohort, and corresponding growth in cohorts over 65. While the number of young children is now increasing slightly, it is anticipated that the overall percentages will continue to decline throughout the 1990s.

Public School Enrollments (K-12) 1986 -87 Through 1990-91

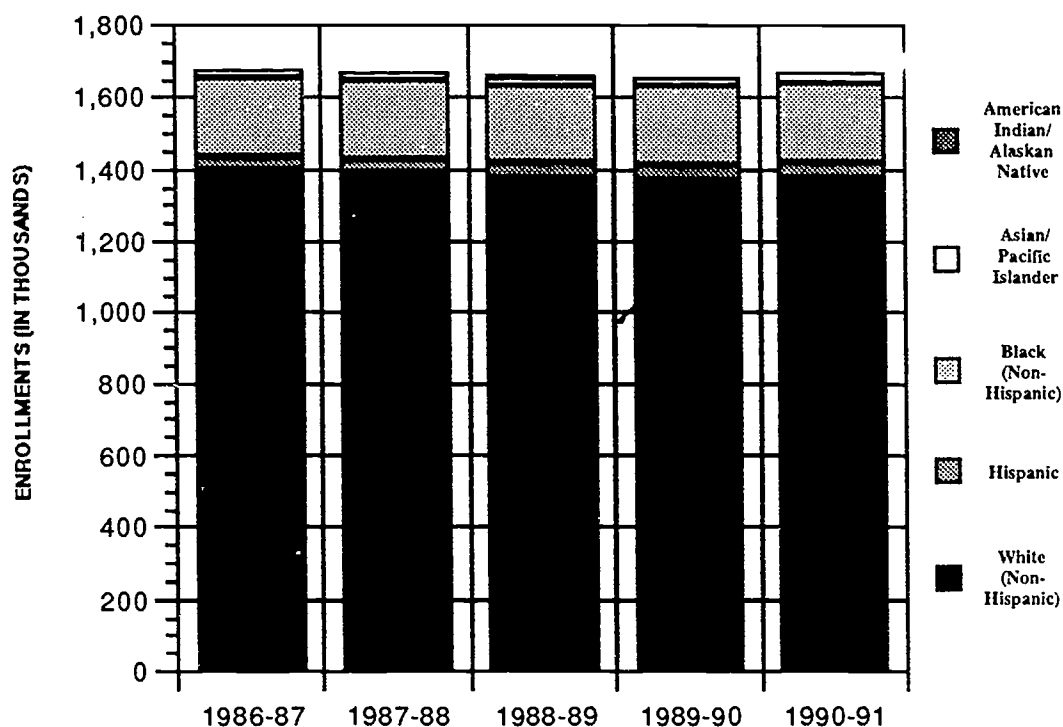


Public School Enrollments

After slight declines through the 1989-90 school year, enrollments have leveled off, and appear to be increasing slightly. However, secondary enrollments are expected to continue their decline for several more years.

PA Department of Education

Public School Enrollments By Race 1986 -87 Through 1990-91



Public School Enrollments by Race

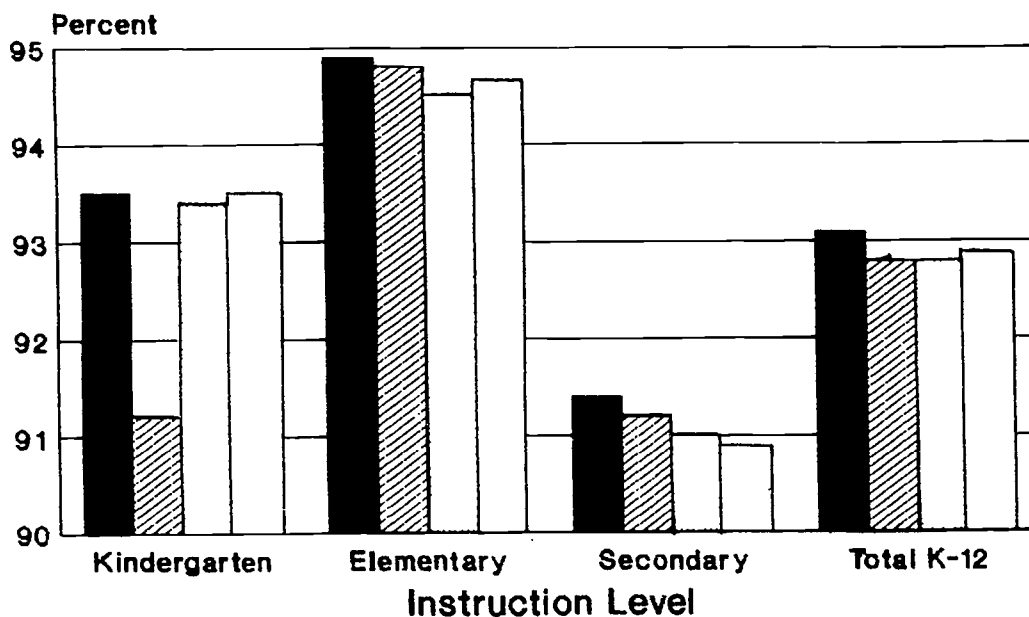
Pennsylvania public schools remain predominately white with slow growth in percentages of minority students.

**Public School Enrollments by Racial/Ethnic Category
1986-87 through 1990-91**

| | Total | American Indian/ Alaskan Native | Asian/ Pacific Islander | Black (Non- Hispanic) | Hispanic | White (Non- Hispanic) |
|----------------|-----------|--|-------------------------------|-----------------------------|----------|-----------------------------|
| 1986-87 | | | | | | |
| Number | 1,674,161 | 1,178 | 21,435 | 219,309 | 36,827 | 1,395,412 |
| Percent | 100.00 | 0.07 | 1.28 | 13.10 | 2.20 | 83.35 |
| 1987-88 | | | | | | |
| Number | 1,668,542 | 1,190 | 22,912 | 218,351 | 39,038 | 1,387,051 |
| Percent | 100.00 | 0.07 | 1.37 | 13.09 | 2.34 | 83.13 |
| 1988-89 | | | | | | |
| Number | 1,658,335 | 1,238 | 24,265 | 215,406 | 40,749 | 1,376,677 |
| Percent | 100.00 | 0.07 | 1.46 | 12.99 | 2.46 | 83.02 |
| 1989-90 | | | | | | |
| Number | 1,655,271 | 1,352 | 25,479 | 216,124 | 42,818 | 1,369,498 |
| Percent | 100.00 | 0.08 | 1.54 | 13.05 | 2.59 | 82.74 |
| 1990-91 | | | | | | |
| Number | 1,667,087 | 1,358 | 26,840 | 218,833 | 46,451 | 1,374,405 |
| Percent | 100.00 | 0.08 | 1.61 | 13.08 | 2.79 | 82.44 |

PA Department of Education

Pennsylvania Average Daily Attendance

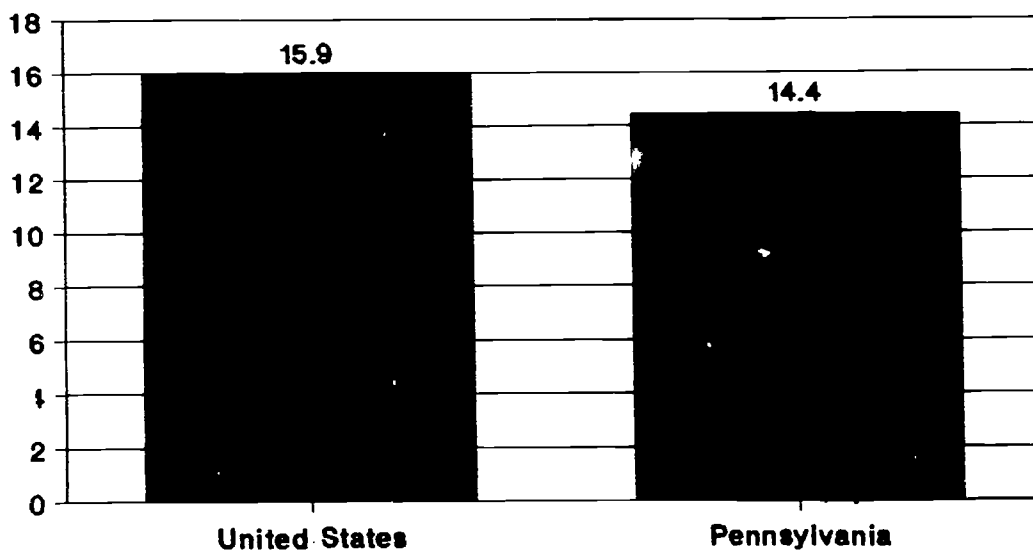


1986-87
 1987-88
 1988-89
 1989-90

PA Department of Education Average Daily Attendance

Average daily attendance has remained relatively constant at about 93% statewide. However, a slight downward trend can be noted for secondary students.

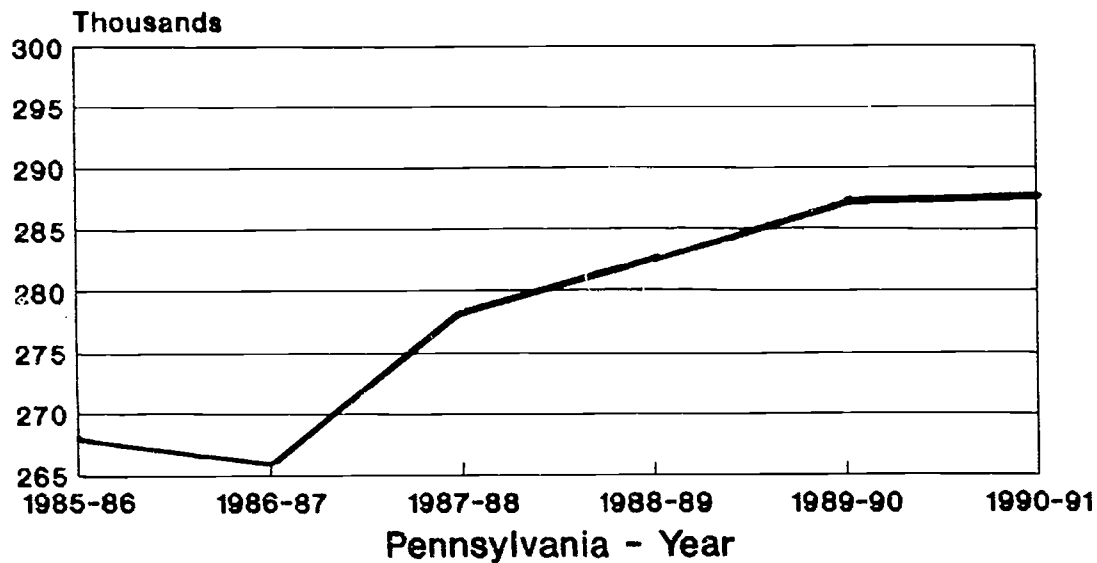
Average Daily Attendance Per Teacher in Public Schools



National Education Association

Pennsylvania has an average daily attendance of 14.4 pupils per teacher which is lower than the national average of 15.9 pupils per teacher.

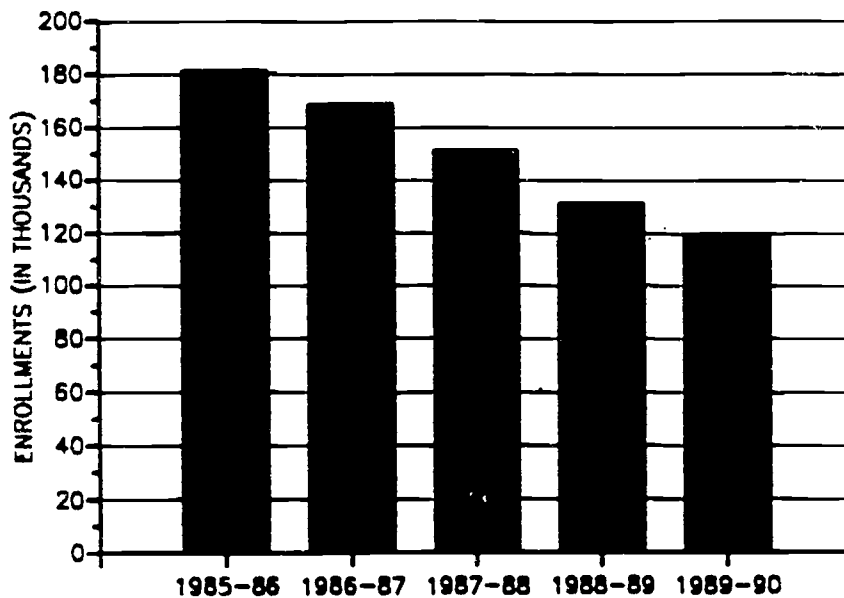
Special Education Students 1985-86 to 1990-91



PA Department of Education Special Education Students

The number of special education students has grown steadily since the 1986-87 school year. (The chart includes gifted students.)

VOCATIONAL SECONDARY PROGRAM ENROLLMENTS 1985-86 THROUGH 1989-90



PA Department of Education

Vocational Secondary Enrollments

The number of vocational enrollments has fallen steadily over the last five years.

PENNSYLVANIA HIGHER EDUCATION

Pennsylvania has one of the most diverse systems of higher education with 565,727 students attending colleges and universities. An additional 196,389 students attend private licensed and registered schools across the state. There are 14 State Universities which with the aid of state funds provide higher education opportunities for Pennsylvania's citizens. In addition, the Commonwealth also provides financial support to the Pennsylvania State University, University of Pittsburgh, Temple University, and Lincoln University. The 13 community colleges located across the state offer students a wide range of educational programs from associate degrees to technical certificates. Pennsylvania also has the largest number of private colleges and universities in the United States.

NUMBER OF POSTSECONDARY INSTITUTIONS DIVERSITY OF SYSTEM

| | |
|---|-----|
| Colleges and Universities | 144 |
| State Universities | 14 |
| State-Related Commonwealth Universities | 4 |
| Community Colleges | 13 |
| Private State-Aided Institutions | 11 |
| Private Colleges and Universities | 76 |
| Theological Seminaries | 16 |
| Private Junior Colleges | 9 |
| Private Licensed Schools In-State | 309 |
| Private Registered Schools Out-of-State | 31 |
| State School of Technology | 1 |
| Other Approved Schools | 2 |

COLLEGES AND UNIVERSITY FALL ENROLLMENTS BY TYPE OF INSTITUTION

| | 1985 | 1990 |
|---|---------|---------|
| Total | 515,815 | 565,727 |
| State Universities | 83,168 | 99,082 |
| State-Related Commonwealth Universities | 123,325 | 140,928 |
| Community Colleges | 88,765 | 104,292 |
| Private State-Aided Institutions | 47,145 | 46,437 |
| Private Colleges and Universities | 158,436 | 165,365 |
| Theological Seminaries | 3,206 | 2,899 |
| Private Junior Colleges | 6,770 | 6,233 |
| State School of Technology | | 491 |

Note: Thaddeus Stevens State School of Technology was included in 1990 because of Act 211 of 1990, authorizing this school to grant associate degrees.

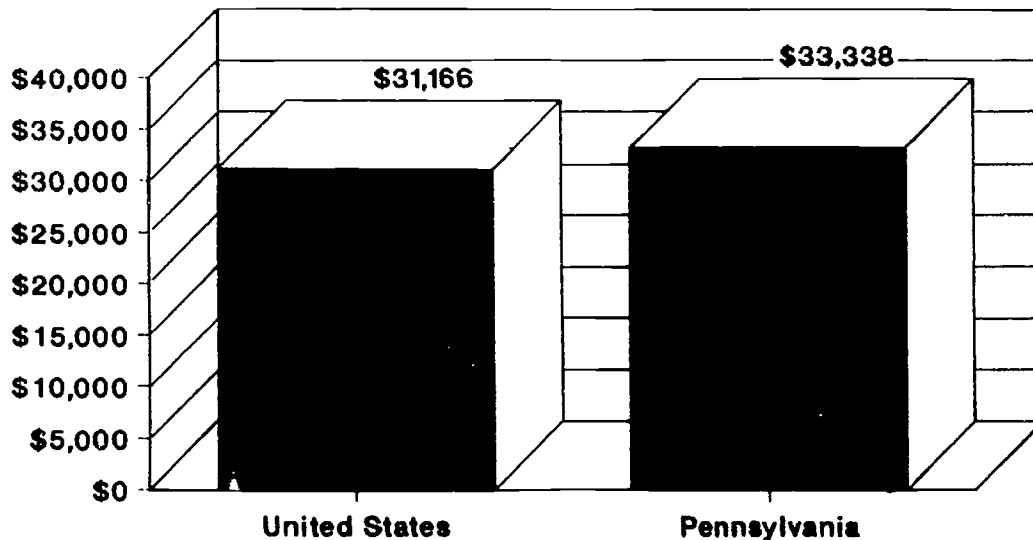
FULL-TIME CLASSROOM TEACHERS AND AVERAGE SALARIES 1985-86 THROUGH 1990-91

| | Classroom Teachers | |
|----------------|--------------------|----------------|
| | Number | Average Salary |
| 1985-86 | 101,665 | \$25,853 |
| 1986-87 | 102,993 | \$27,422 |
| 1987-88 | 103,307 | \$29,177 |
| 1988-89 | 104,379 | \$31,248 |
| 1989-90 | 105,415 | \$33,338 |
| 1990-91* | 99,131 | \$36,057 |

* With the revision of the professional personnel system effective 1990-91, several certificated assignments were recategorized from classroom teachers to coordinate services and other. This affected approximately 4,000 personnel in certificated assignments for developmental or diagnostic/prescriptive reading, English as a second language, etc.

Source: Pennsylvania Department of Education

Estimated Average Salaries of Public School Teachers 1989-90



National Education Association Dollars

Estimated Average Salaries of Teachers -- U.S. and PA

The average salary of a Pennsylvania teacher is \$2,172 higher than the national average.

STATE FINANCIAL SUPPORT FOR EDUCATION

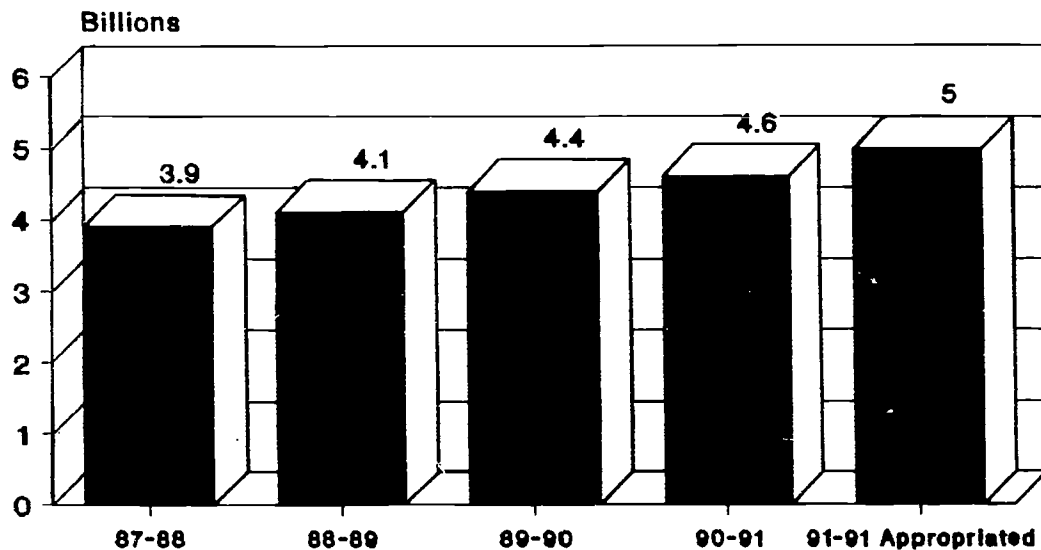
Overview of State Financial Support

More state money is dedicated to strengthening education than to any other single purpose. In all, funding for education and intellectual development comprises 48% of the state general fund budget.

State funding for basic education, including support for educating children in kindergarten through 12th grade, now exceeds \$5 billion annually. The largest single education appropriation, the Equalized Subsidy for Basic Education, provides almost \$3 billion directly to school districts based on factors relating to instructional expense, proportion of low income families, tax effort and population per square mile, district size, and other legislative requirements.

Higher Education funding provides direct support to higher education institutions such as the State System of Higher Education (the state-owned universities), the State-Related institutions (Penn State, Pitt, Temple, and Lincoln), and community colleges. State and federal funds to support student grants and loans are provided through the Pennsylvania Higher Education Assistance Agency.

BASIC EDUCATION FUNDING (State Funds)



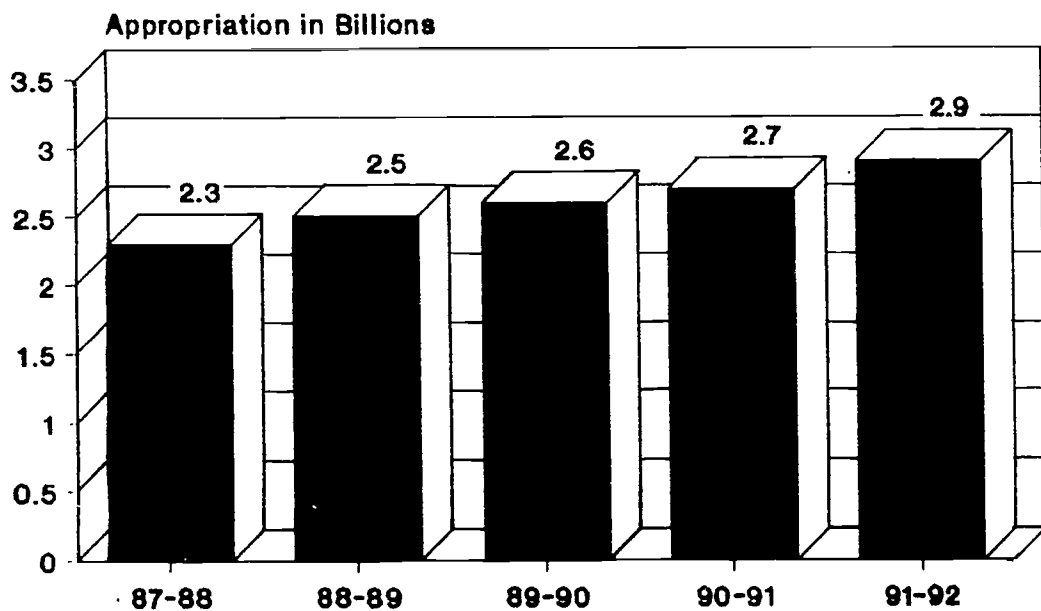
PA Department of Education

Year

Basic Education Funding

State Support for basic education has grown steadily and now exceeds \$5 billion.

Equalized Subsidy for Basic Education



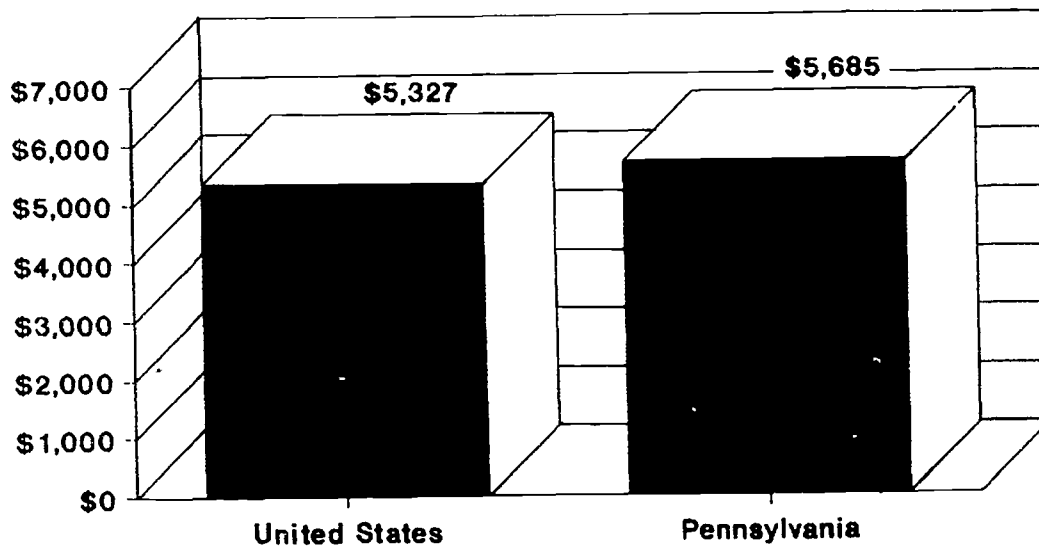
PA Department of Education

Years

Equalized Subsidy

The Equalized Subsidy for Basic Education (ESBE), the major state support to public schools, has grown substantially to almost \$3 billion.

Public School Revenue Per Pupil In Average Daily Attendance 1989-90

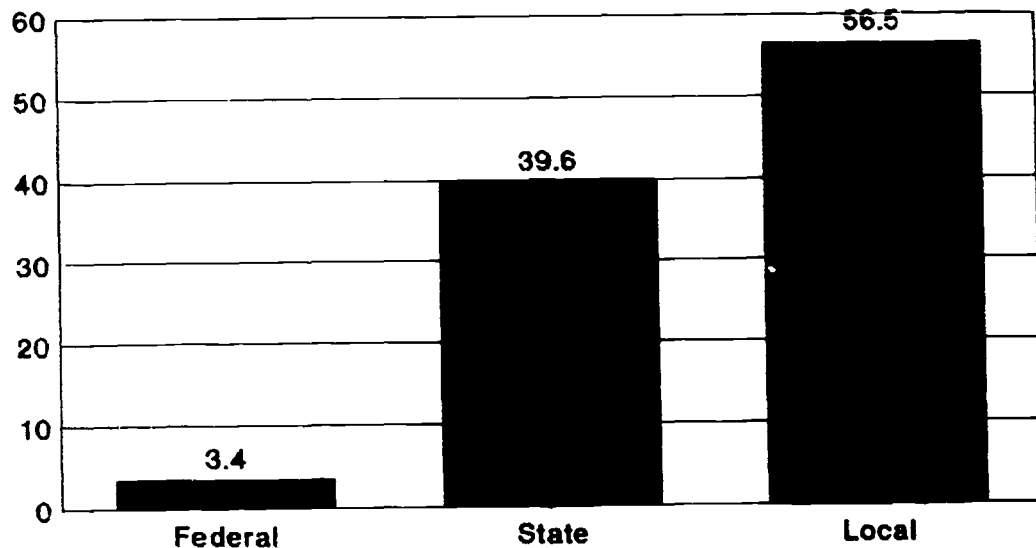


PA Department of Education ■ Dollars

Public School Revenue Per Pupil -- U.S. and PA

Pennsylvania exceeds the national average for public school revenue per pupil by \$375.

General Fund Revenue of School Districts By Source of Fund - 1988-89

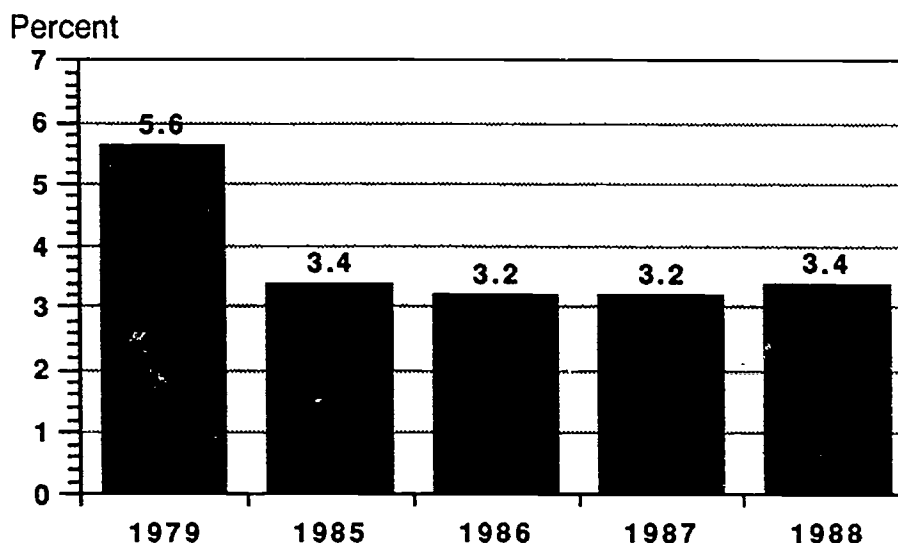


PA Department of Education ■ Percentage

General Fund Revenue of School Districts by Source

In the 1988-89 school year (the most recent year for which federal figures are available), the federal government provided 3.4%, the state provided 39.6%, and the local school districts provided 56.5% of Pennsylvania school district revenues.

Federal Funds as Percent of General Fund Revenues of School Districts



PA Department of Education

Over the decade of the 1980's federal funds declined by 40% as a percent of total Pennsylvania school expenditures.

International Comparison of Education Expenditures, 1985

| County | Expenditure Per Pupil* | Expenditure Rank |
|----------------------|------------------------|------------------|
| Switzerland | \$7,061 | 1 |
| Sweden | 5,932 | 2 |
| Norway | 5,002 | 3 |
| Japan | 4,972 | 4 |
| Denmark | 4,410 | 5 |
| Austria | 4,297 | 6 |
| West Germany | 4,016 | 7 |
| Canada | 3,683 | 8 |
| Pennsylvania | 3,541 | 9 |
| United States | 3,456 | 10 |
| Belgium | 3,254 | 11 |
| Netherlands | 3,224 | 12 |
| France | 3,094 | 13 |
| United Kingdom | 2,314 | 14 |
| Australia | 2,291 | 15 |
| Italy | 1,809 | 16 |
| Ireland | 1,380 | 17 |

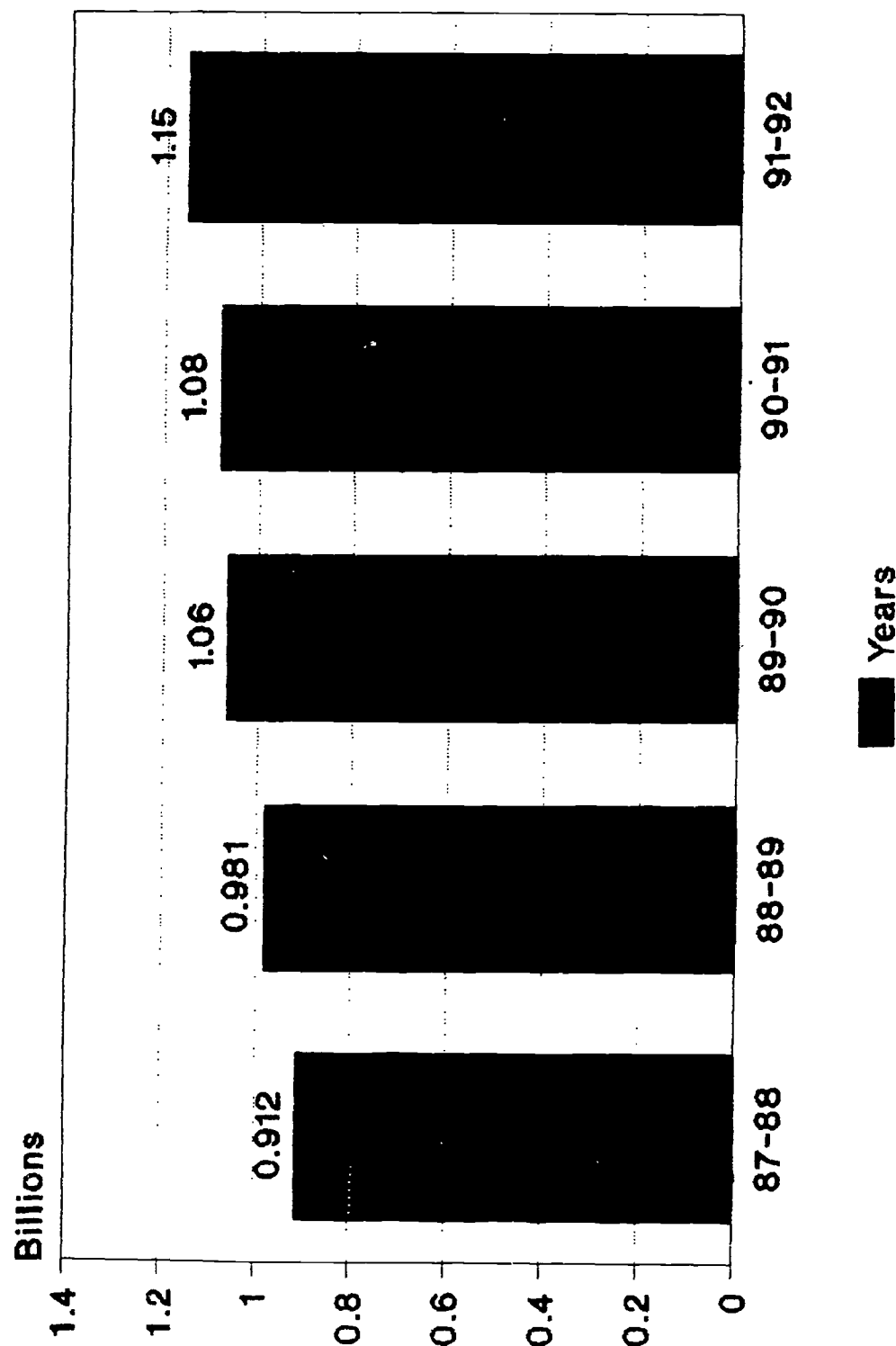
* 1985 average expenditures converted to U.S. dollars using 1988 exchange rates.

Source: Economic Policy Institute (1990). Pennsylvania and United States figures from the National Center for Education Statistics, U.S. Department of Education, represent total dollars available per student in average daily attendance.

International Comparison of Education Expenditures, 1985

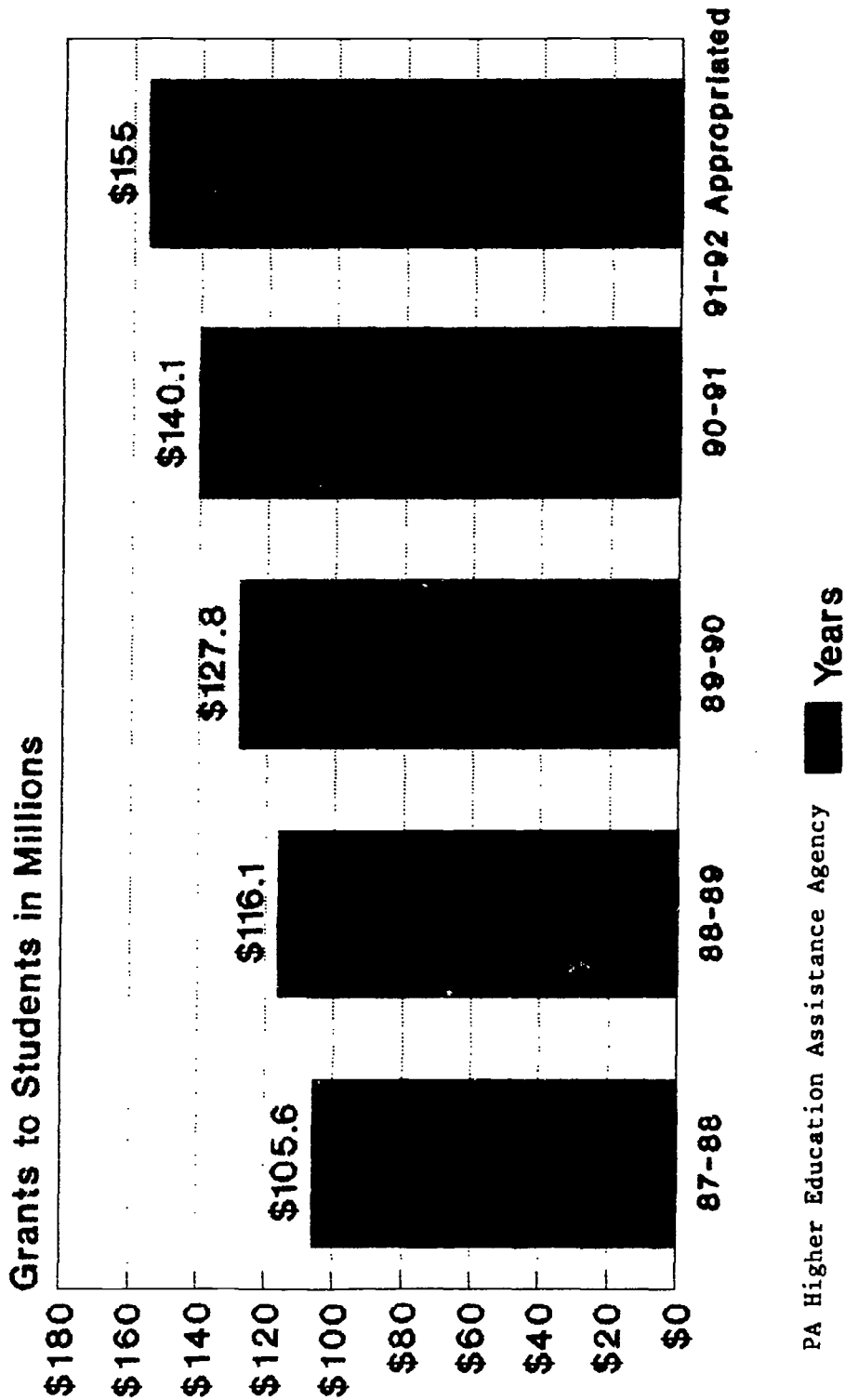
Compared to other industrialized nations, the U.S. spends much less per pupil. However, Pennsylvania is above the national average.

State Funds for Higher Education



STUDENT AID

PA Higher Education Assistance Agency



To reduce financial burdens and increase access to higher education, the Commonwealth provides grants to eligible students. Funds have increased 10% for each of the last five years.

PART II:

PROGRESS TOWARD ATTAINING THE NATIONAL GOALS

This portion of the Progress Report provides data and information on how Pennsylvania is proceeding toward attainment of each of the National Goals. For each of the National Goals and related objectives, we include: (1) a set of indicator and outcome measures relating to the National Goals; (2) current efforts underway in Pennsylvania which relate to attainment of the Goals; and (3) anticipated future actions which will move us toward the Goals.

GOAL 1:

READINESS FOR SCHOOL

“By the year 2000, all children in America will start school ready to learn.”

Objectives:

- “All disadvantaged and disabled children will have access to high quality and developmentally appropriate preschool programs that help prepare children for school.”
- “Every parent in America will be a child’s first teacher and devote time each day helping his or her preschool child learn; parents will have access to the training and support they need.”
- “Children will receive the nutrition and health care needed to arrive at school with healthy minds and bodies, and the number of low birth weight babies will be significantly reduced through enhanced prenatal health systems.”

Outcomes and Measures Relating to Goal 1 — Readiness for School

This section includes data bearing on Goal 1 and its related objectives. Measures detailed include information on:

- low birth weight
- child abuse and neglect
- maternal prenatal care
- preventative health care
- nutrition services
- Head Start and other child care services
- early intervention services for children with disabilities

PERCENT LOW BIRTH WEIGHT AND VERY LOW BIRTH WEIGHT* COMPARED TO TOTAL PENNSYLVANIA BIRTHS, 1985-89

| Year | Low Birth Weight | Very Low Birth Weight |
|-----------|------------------------|--------------------------------|
| 1985..... | 6.6% | 1.3% |
| 1986..... | 6.9% | 1.2% |
| 1987..... | 6.9% | 1.3% |
| 1988..... | 6.9% | 1.3% |
| 1989..... | 7.1% | 1.4% |

* Low Birth Weight is less than 2500 grams Very Low Birth Weight is less than 1500 grams

PA Department of Health

Percent Low Birth Weight

Low birth weight is often associated with a host of developmental problems in early childhood as well as later in life.

Pennsylvania experienced slight increases in the percentages of both low birth weight and very low birth weight babies from 1985 to 1989.

MATERNAL PRENATAL CARE

(Percent of resident live births where mother's first prenatal
visit was in the first trimester of pregnancy.)

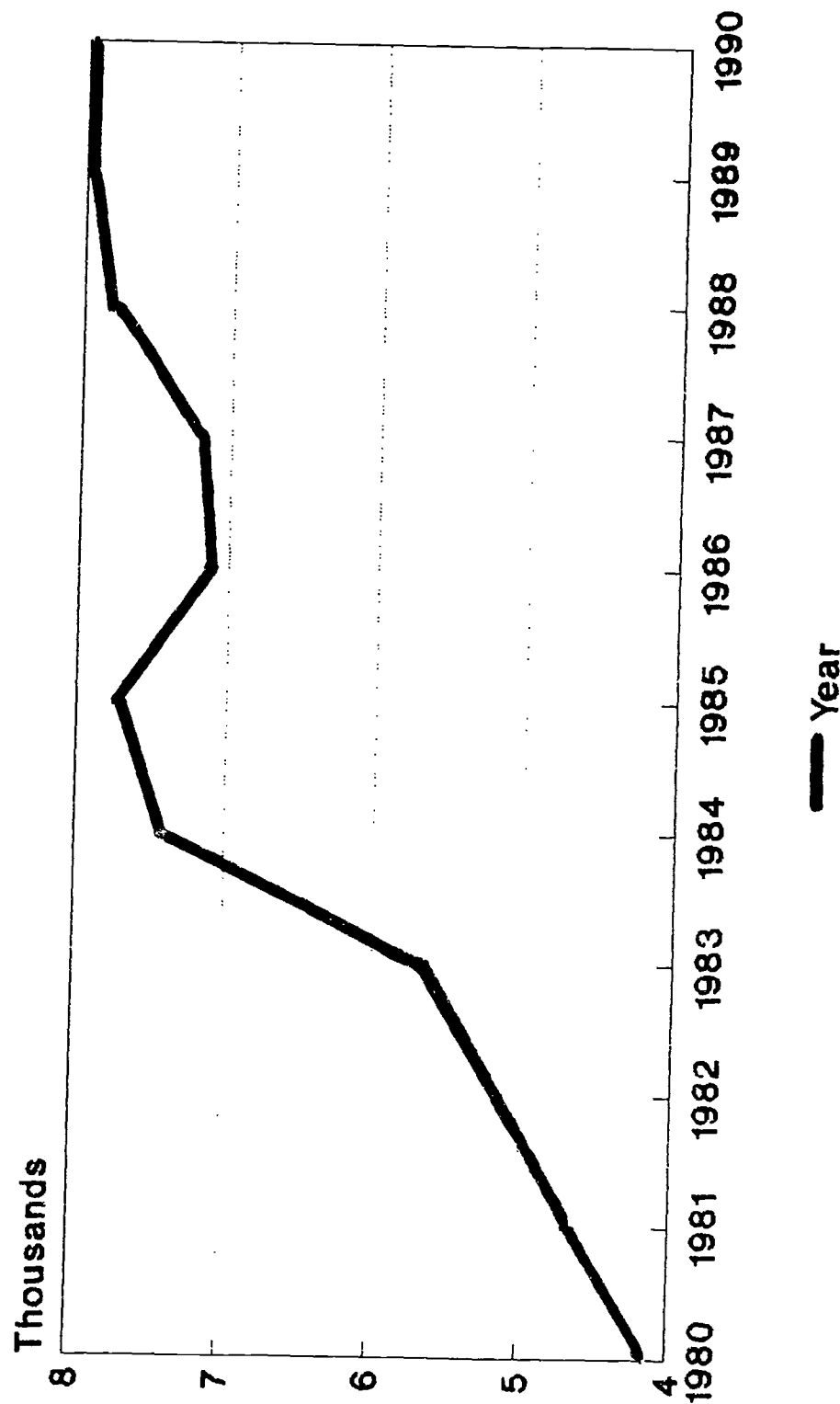
| Year | Percent |
|-----------|---------|
| 1985..... | 75.2% |
| 1989..... | 77.4% |

PA Department of Health

Maternal Prenatal Care

Early prenatal care has been demonstrated to improve the babies' health and well being. The percent of Pennsylvanians whose first prenatal doctors visit was in the first trimester (3 months) of pregnancy increased slightly between 1985 and 1989.

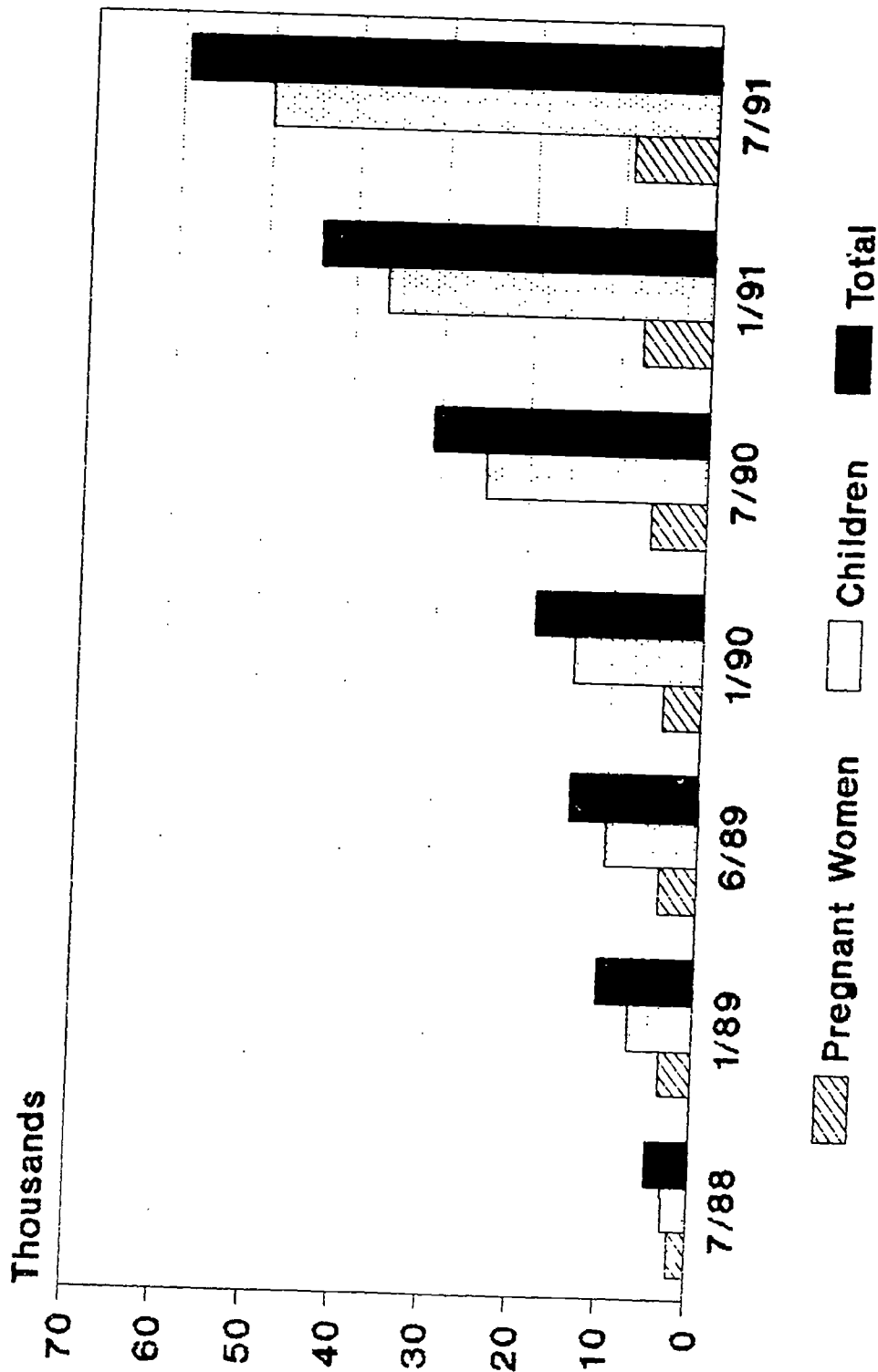
Number of Substantiated Cases of Child Abuse and Neglect in Pennsylvania



Source: PA Dept. of Public Welfare

The number of substantiated cases of child abuse and neglect in Pennsylvania reached an all time high in 1990. Abused and neglected children tend to trust less, and to have more difficulty developing healthy social relationships.

Healthy Beginnings Medical Assistance



Healthy Beginnings

Healthy Beginnings provides parental and preventive health care services to low-income families. Enrollment in July 1991 was almost 60,000.

Source: PA Dept. of Public Welfare

WOMEN, INFANTS AND CHILDREN NUTRITIONAL SERVICES

| Year | Average Monthly Participation | Percent of Eligible Population Served |
|------------|-------------------------------------|---|
| 1985 | 149,344 | 44.7% |
| 1989 | 217,518 | 64.7% |
| 1990 | 226,030 | 67.0% |

PA Department of Health

Women, Infants, and Children (WIC) Nutritional Services WIC provides healthy food, nutritional advice, and referral to health care for low income women who are pregnant, who breast feed and/or who have children under five years of age. Participation in the WIC program has grown steadily over the last five years.

PA is one of a very few states which provide significant funds to augment federal dollars for WIC.

Early and Periodic Screening, Diagnosis and Treatment (EPSDT)

| Year | Number Children Served | Total Screens Performed |
|------------|------------------------------|-------------------------------|
| 1988 | 110,010 | 130,183 |
| 1989 | 110,657 | 138,248 |
| 1990 | 116,257 | 145,637 |
| 1991 | 133,566 | 174,454 |

PA Department of Public Welfare

EPSDT

The Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) Program provides comprehensive well-child examinations for children up to the age of 21 who are eligible for Medical Assistance. The first column indicates the total number of children examined in each program year, while the second column shows the total number of exams performed (younger children might need multiple exams per year, while older youth might need them less frequently than every year). Approximately 40% of eligible children participate in the EPSDT Program.

HEAD START

| Year | Children Enrolled |
|-----------|----------------------|
| 1985..... | 15,990 |
| 1989..... | 17,130 |
| 1990..... | 19,527 |

U.S. Department of Health and Human Services

Head Start

Head Start is a federally funded program of comprehensive educational, health and social services for economically disadvantaged children of ages three to five. Numbers of children served have grown steadily in recent years, due to increasing federal appropriations. Yet, at present funds are available to serve only about 30% of eligible children. Pennsylvania is one of only 13 states to receive a Head Start Collaboration Grant from the U.S. Department of Health and Human Services, designed to support the coordination of Head Start with other programs and services to meet the needs of young children.

SUBSIDIZED CHILD DAY CARE THROUGH STATE AND FEDERAL FUNDS

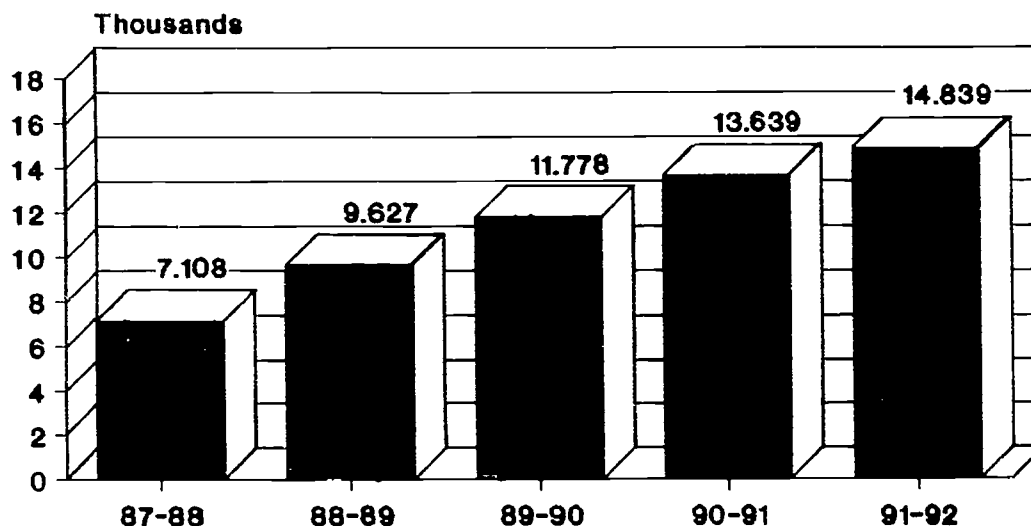
| Year | Children Served |
|--------------|--------------------|
| 1986-87..... | 25,435 |
| 1987-88..... | 26,823 |
| 1988-89..... | 27,895 |
| 1989-90..... | 28,945 |

PA Department of Public Welfare

Subsidized Child Care

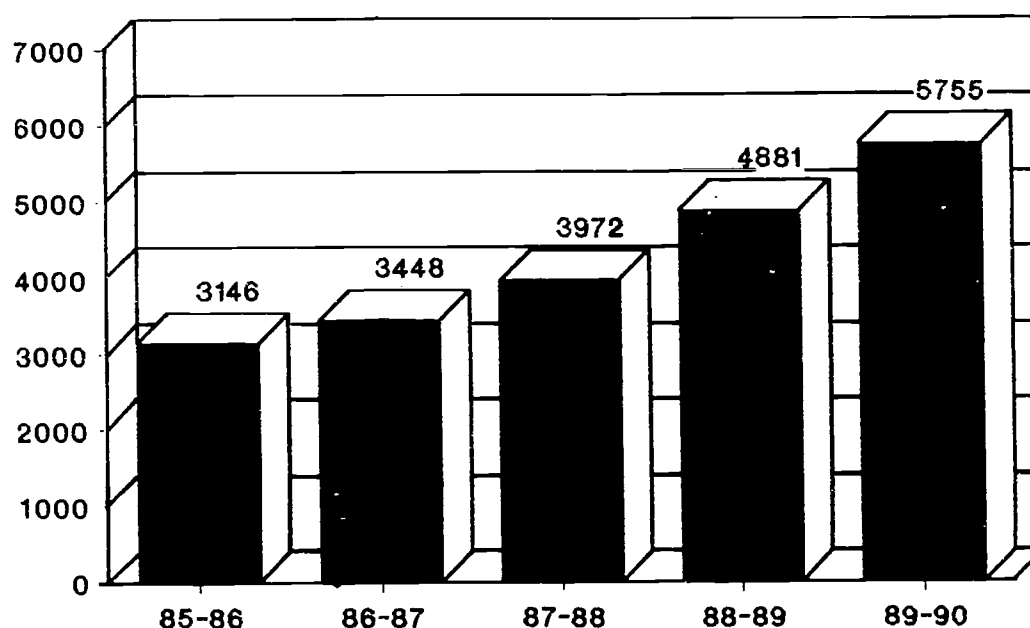
Quality child care can be an important factor in readiness for school. The numbers of children served through state and federally subsidized child care have grown steadily since 1986.

3-5 Year Olds Served In Early Intervention



PA Department of Education ■ Series 1

Birth - 2 Year Olds Served In Early Intervention



PA Department of Public Welfare

Early Intervention

Federal law requires as of July 1, 1991, that children with disabilities receive early intervention services from birth through age five. My number of children served has increased steadily from 1987-88 (the first year state funding was made available for the program). The Department of Public Welfare still serves some children between the ages of 3 and 5 which will be transferred to the Department of Education. Those children were not included in this chart.

Summary and Conclusions

Goal 1 — Readiness

The National Education Goals Panel has acknowledged that few good measures of school readiness exist. Therefore, while the data reported in this section can be considered to be related to a child's readiness for school, at this time we are not able to measure in a real sense our progress towards Goal 1. However, the data do provide us with information which suggests ways to approach the readiness issue.

First, it is troubling that the percentages of low and very low birth weight babies rose slightly but steadily between 1985 and 1989. Of similar concern is the increase in the number of cases of child abuse and neglect. These figures suggest two important areas for expanded attention. With regard to low birthweight, the recently initiated Healthy Beginnings Plus program provides an extensive set of health and counseling services for poor pregnant women. In time, this effort should result in lowered percentages of low birthweight babies. Abuse and neglect of children by parents is a difficult problem to address directly. One way of attempting to improve parents' interactions with their children is by educating them on how to be more effective parents. Therefore, parent education efforts are being mounted to provide parents with good information on how to engage their children in developmentally appropriate activities and play, and to ensure sound basic health and nutrition. In time, these efforts have the potential to reduce the incidence of child abuse and neglect.

Services are expanding steadily for economically disadvantaged women and children through primarily federal programs for nutrition, health, and child care programs as Healthy Beginnings, Women, Infants and Children (WIC), subsidized child care, and Early and Periodic Screening, Diagnosis, and Treatment (EPSDT). Increases in services are the result of additional funding available from federal and state sources, but many more women and children are eligible than are currently receiving services. Similarly, Head Start, the federal program of comprehensive child care, health, and nutritional services for disadvantaged 3-5 year olds, is showing steady growth, but provides insufficient funds to cover even one-third of eligible children. In recent years state funds have been increased to expand these efforts (e.g., WIC), and to mount new efforts in school-based child care and early intervention services for children with disabilities.

The availability of programs and services does not mean that children who receive them will necessarily be ready for school. Yet, a child who has access to sound nutrition, health care, and developmentally appropriate activities, either in the home or through quality child care, will most certainly stand a better chance at arriving at school ready to learn than one who has not. In future years, better indicators of readiness will be available. Until then, our best hope to meet Goal 1 appears to be increasing the numbers of eligible children who are receiving the services they need.

In addition to providing these services to children and their families, efforts at all governmental levels should focus on programs and activities which bolster families. These approaches should be designed to provide parents with the support and help they need to make their children ready for school and for productive lives.

Current Efforts to Meet Goal 1

The Commonwealth is providing a variety of activities and programs to provide young children with appropriate education and support services. Some of these include:

- **Healthy Beginnings** — Pennsylvania implemented the Healthy Beginnings Program on April 1, 1988, in response to Congressional action allowing optional expansion of medical benefits to pregnant women and children under the Medicaid program. Healthy Beginnings provides prenatal and preventive health care services to families. Age limits at the start of the program in 1988 were up to two years and the income threshold was 100% of poverty. These have increased over time so that as of July 1, 1991, the age limit is up to nine years and the income threshold is 133% of poverty for pregnant women and children up to six, and 100% for six, seven, and eight year olds. Enrollment in Healthy Beginnings has grown steadily reaching almost 60,000 this year.

- **Healthy Beginnings Plus** — Pennsylvania's new Healthy Beginnings Plus program began April 1990. To the basic medical prenatal care program of Medical Assistance/Healthy Beginnings are added such services: (1) nutrition, health and parenting education; (2) psychological and social services assessments; (3) counseling on smoking cessation and counseling to identify and reduce or refer drug and alcohol abuse problems; (4) home visits by a nurse or social worker and (5) the key feature of care coordination. To date 70 hospitals, clinics and private practices in over 30 counties have been provisionally accepted to be Healthy Beginnings Plus providers. Estimated current enrollment of pregnant women is close to 3,000.
- **Expansion of Prenatal Care** — The Department of Public Welfare has entered into the largest public/private partnership for expanding prenatal health care to low income families in the state's history. Through this effort, targeted rural and urban hospitals will be funded to provide creative outreach to pregnant women. An extensive evaluation of its success will be conducted demonstrating its success at increasing the level of prenatal care and reduction on incidents of low birth weight.
- **Immunization** — The Commonwealth is expanding its efforts to have all low income children immunized in accordance with the immunization schedule established by the American Academy of Pediatrics. Such efforts include: (1) bulk purchasing of the vaccines and distribution to major providers who serve low income families; (2) reimbursing physicians for the full cost of the vaccines provided to medicaid eligible children; and (3) requiring that the children they serve (such as day care) have received the necessary immunization.
- **Model Child Care Program** — Over the last three years, state funds have enabled schools to initiate and/or expand programs for young children and their families, including services for infants and toddlers, and before and after school activities.
- **Early Intervention** — Services for preschool children developmentally delayed, disabled, or at-risk of disabling conditions, have been extended to children from birth to age five.
- **Head Start Collaboration Project** — Pennsylvania received support from the U.S. Department of Health and Human Services to strengthen ties between state early childhood programs and local Head Start providers.
- **Parent Education** — The Department of Education's "Support from the Home Team" provides materials to give families information on effective parenting, methods of bringing schools and families together, and a wealth of information about effective practices to improve family relationships.

In addition, the Department of Education is working closely with the Scott Paper Company Foundation to implement the Missouri "Parents-As Teachers" family education program in selected schools in Philadelphia.

Public libraries also provide programs and information about parenting. Many library programs stress the importance of parents reading to their children. Libraries also refer parents to social agencies and community services.

- **Governor's Commission for Children and Families** — The Governor has appointed a group of statewide experts in fields relating to the needs of children to consider ways to improve services and education, and to make recommendations to him for improvements.
- **Early Childhood Study** — The State Board of Education conducted a study of early childhood needs and made recommendations for improvement of services provided to meet those needs.
- **Pre-School Library Programs** — Public libraries provide story hours emphasizing reading readiness to all pre-schoolers, beginning with infants. The State Library provides grants to support such programs.

Future Directions to Meet Goal 1

- **Family Centers** — Establish a network of Family Centers in or accessible to elementary schools, which would provide a range of social, health, education and training services for children and families.

- **Parents-As-Teachers** — Expand P-A-T and other family/parent education programs in substantially more school districts.
- **School-Based Child Care** — Continue to work with school districts to assist in the development of comprehensive child care services, including before and after school care, as well as pre-school care.
- **School-Based Health Care** — Establish in elementary schools primary care facilities which would provide mandated school health services, dental care, screenings, EPSDT, monitoring and prescription or other diagnostic services.
- **Integrated Services** — Working with Head Start as a base, develop a comprehensive school-based system of education, social and health services for all economically disadvantaged children from birth to school age.
- **Age Three Kindergarten** — Lower the reimbursement age for kindergarten to three and strongly encourage full day kindergarten for five-year-olds.
- **Pre-School** — Work towards providing at least two years of developmentally appropriate pre-school for children before entering first grade.
- **Data Collection** — Improve capacity to collect and report data on relevant outcomes and characteristics of school readiness.

GOAL 2:

HIGH SCHOOL COMPLETION

“By the year 2000, the high school graduation rate will increase to at least 90%.”

Objectives:

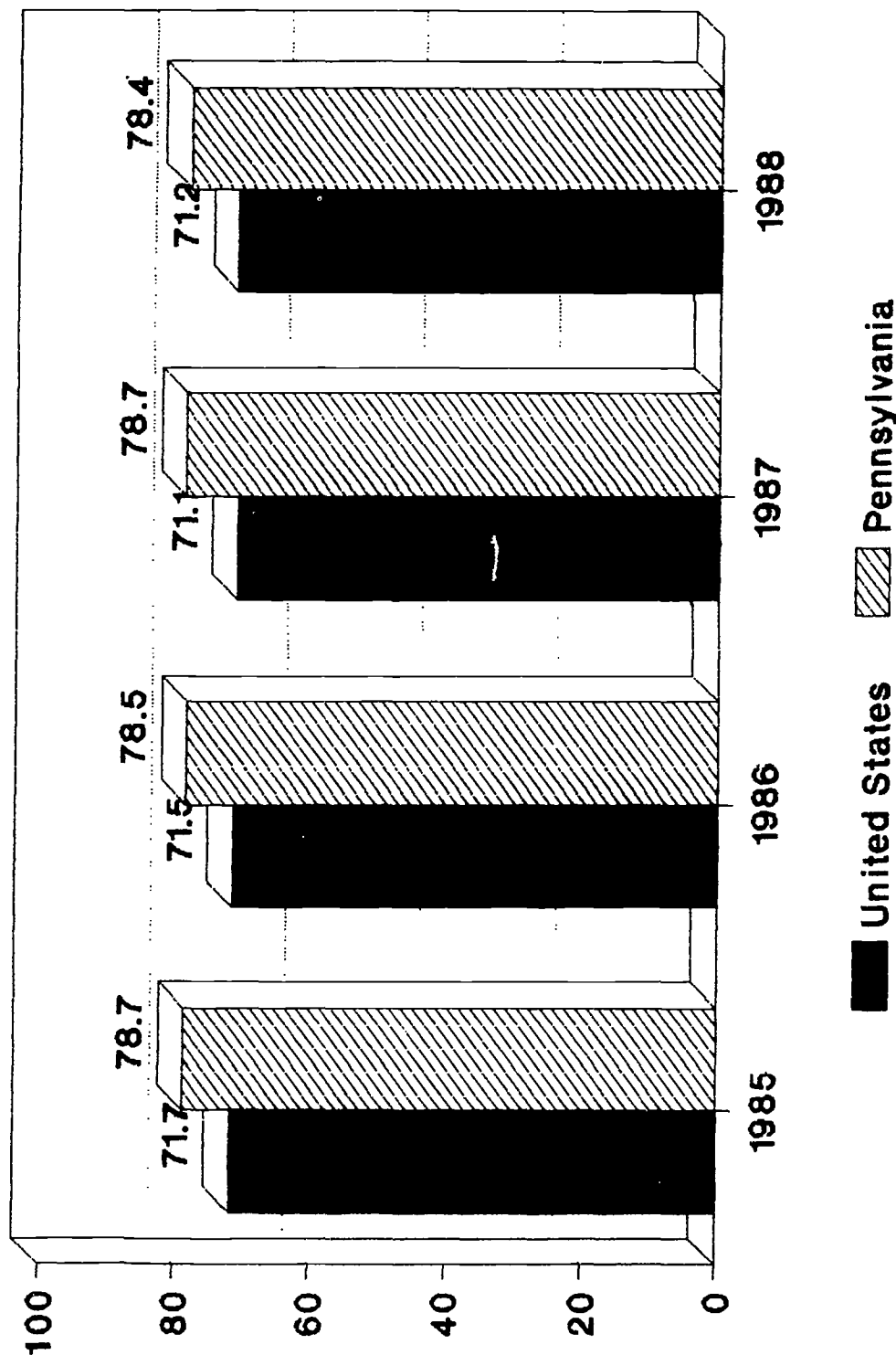
- “The nation must dramatically reduce its dropout rate, and 75% of those students who do drop out will successfully complete a high school degree or its equivalent.”
- The gap in high school graduation rates between American students from minority backgrounds and their non-minority counterparts will be eliminated.”

Outcomes and Measures Relating to Goal 2 — High School Completion

This section includes data bearing on Goal 2 and its related objectives. Measures detailed include information such as:

- graduation rates
- dropout rates by gender, race, ethnicity
- reasons for dropping out
- percentages of school districts with higher and lower dropout rates
- effectiveness of state dropout and teen parenting initiatives
- schools receiving performance awards for lowering dropout rates
- General Education Development (GED) test completion data

High School Graduation Rates

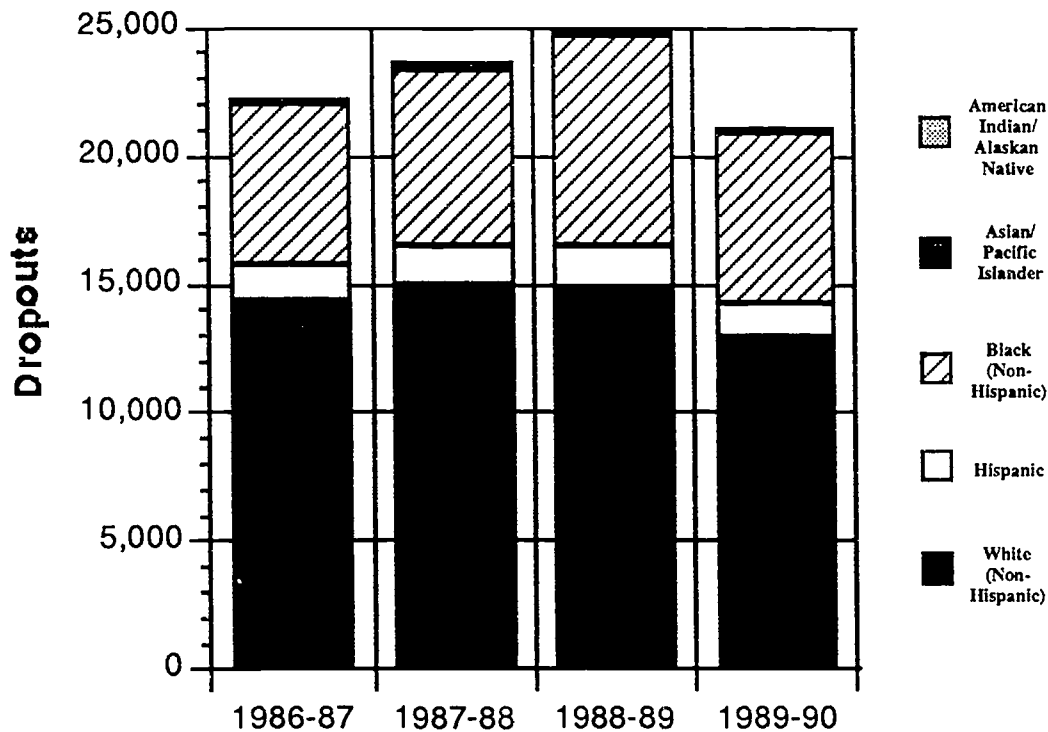


Graduation Rates

U.S. Department of Education

Federal reports of high school graduation rates show Pennsylvania's percentages to be relatively stable at between 77-78%. It should be noted, however, that the U.S. Department of Education has been criticized for the methodology which derived these numbers, and new data collection strategies are now being developed. These data are included here because they provide rough estimates of graduation rates (and, conversely, dropout rates) in terms which are readily understood (e.g. 78% graduation rate; 22% dropout rate). In contrast, Pennsylvania's dropout data, which follow, are collected based on the numbers of students in grades 7-12 who drop out of school in a given year. The resulting percentage, approximate 2.93% for 1989-90, is less familiar.

Dropouts By Race 1986 -87 Through 1989-90



PA Dept. of Education

Dropouts by Race

After three years of increasing dropout rates, the 1989-90 school year showed a decrease to about 21,000, down from approximately 25,000 in the previous year. Numbers and percentages of Black and Hispanic dropouts grew from 1986-87 to 1988-89, but fell back slightly in 1989-90.

Note: The total dropouts refer to the numbers and percents for one year in grades 7 – 12 and not total numbers or percents for graduating classes.

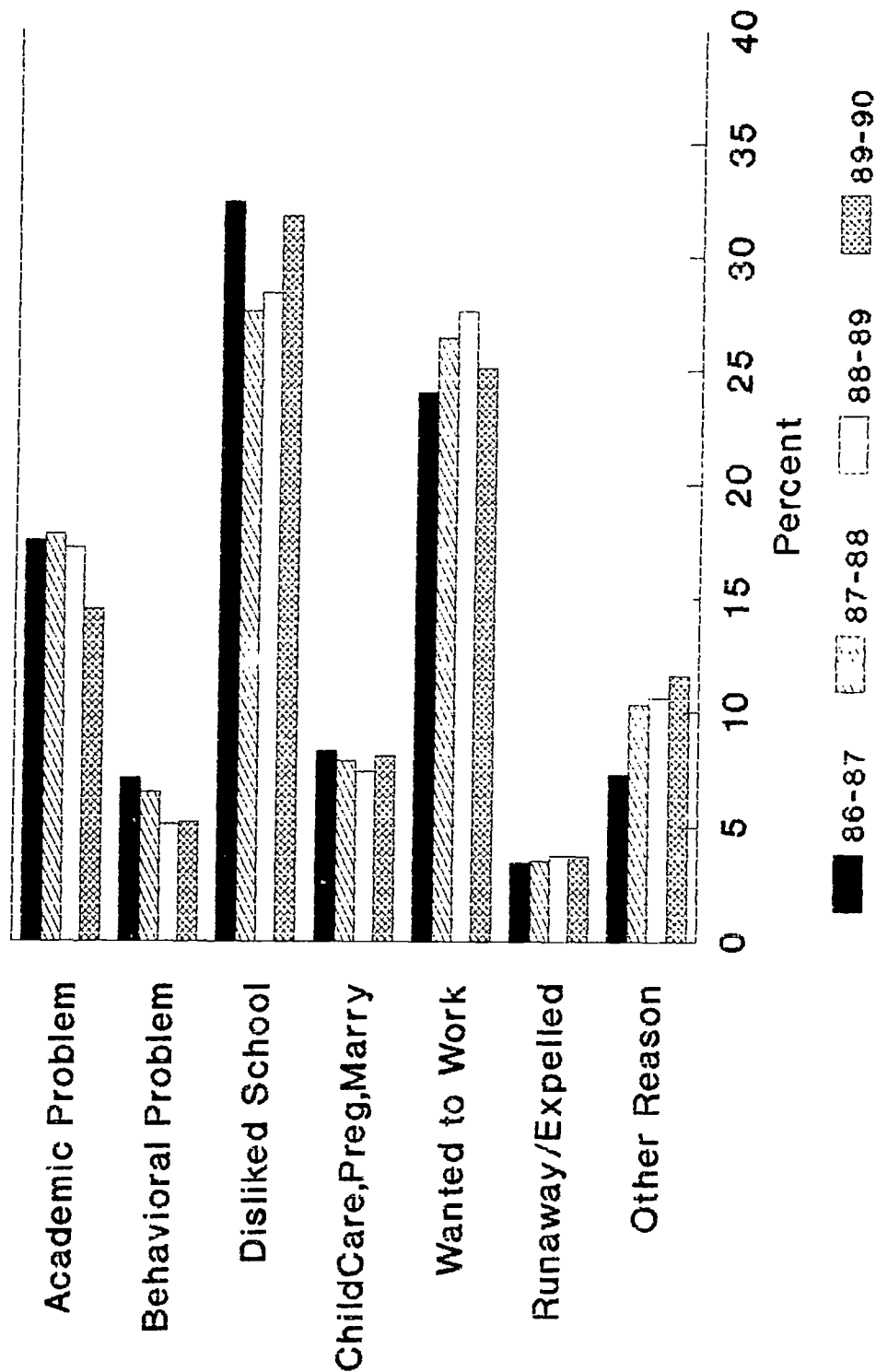
DROPOUTS BY RACIAL/ETHNIC CATEGORY AND SEX

| | Secondary Enrollments | Dropouts | | Total | Dropout Rate |
|--------------------------|--------------------------|----------|--------|--------|-----------------|
| | | Male | Female | | |
| 1986-87 | | | | | |
| Amer Ind/Alsk Natv | 665 | 21 | 8 | 29 | 4.36 |
| Asian/Pac Islander | 9,844 | 131 | 109 | 240 | 2.44 |
| Black/Non-Hisp | 99,633 | 3,411 | 2,799 | 6,210 | 6.23 |
| Hispanic | 14,839 | 792 | 584 | 1,376 | 9.27 |
| White/Non-Hisp | 670,018 | 8,432 | 5,977 | 14,409 | 2.15 |
| TOTALS | 794,999 | 12,787 | 9,477 | 22,264 | 2.80 |
| 1987-88 | | | | | |
| Amer Ind/Aksk Natv | 650 | 13 | 5 | 18 | 2.77 |
| Asian/Pac Islander | 10,611 | 154 | 110 | 264 | 2.49 |
| Black/Non-Hisp | 96,508 | 3,890 | 2,963 | 6,853 | 7.10 |
| Hispanic | 15,566 | 806 | 618 | 1,424 | 9.15 |
| White/Non-Hisp | 649,660 | 8,969 | 6,077 | 15,046 | 2.32 |
| TOTALS | 772,995 | 13,832 | 9,773 | 23,605 | 3.05 |
| 1988-89 | | | | | |
| Amer Ind/Alsk Natv | 634 | 17 | 6 | 23 | 3.63 |
| Asian/Pac Islander | 11,117 | 207 | 139 | 346 | 3.11 |
| Black/Non-Hisp | 91,069 | 4,560 | 3,609 | 8,169 | 8.97 |
| Hispanic | 15,926 | 900 | 730 | 1,630 | 10.23 |
| White/Non-Hisp | 623,311 | 8,735 | 6,080 | 14,815 | 2.38 |
| TOTALS | 742,057 | 14,419 | 10,564 | 24,983 | 3.37 |
| 1989-90 | | | | | |
| Amer Ind/Alsk Natv | 686 | 14 | 8 | 22 | 3.21 |
| Asian/Pac Islander | 11,533 | 225 | 100 | 325 | 2.82 |
| Black/Non-Hisp | 89,137 | 3,597 | 2,951 | 6,548 | 7.35 |
| Hispanic | 16,317 | 773 | 578 | 1,351 | 8.28 |
| White/Non-Hisp | 605,106 | 7,502 | 5,430 | 12,932 | 2.14 |
| TOTALS | 772,779 | 12,111 | 9,067 | 21,178 | 2.93 |

PA Department of Education

Note: The total dropouts refer to numbers and percents for one year in grades 7-12 and not total numbers or percents for graduating classes.

Dropouts by Reason

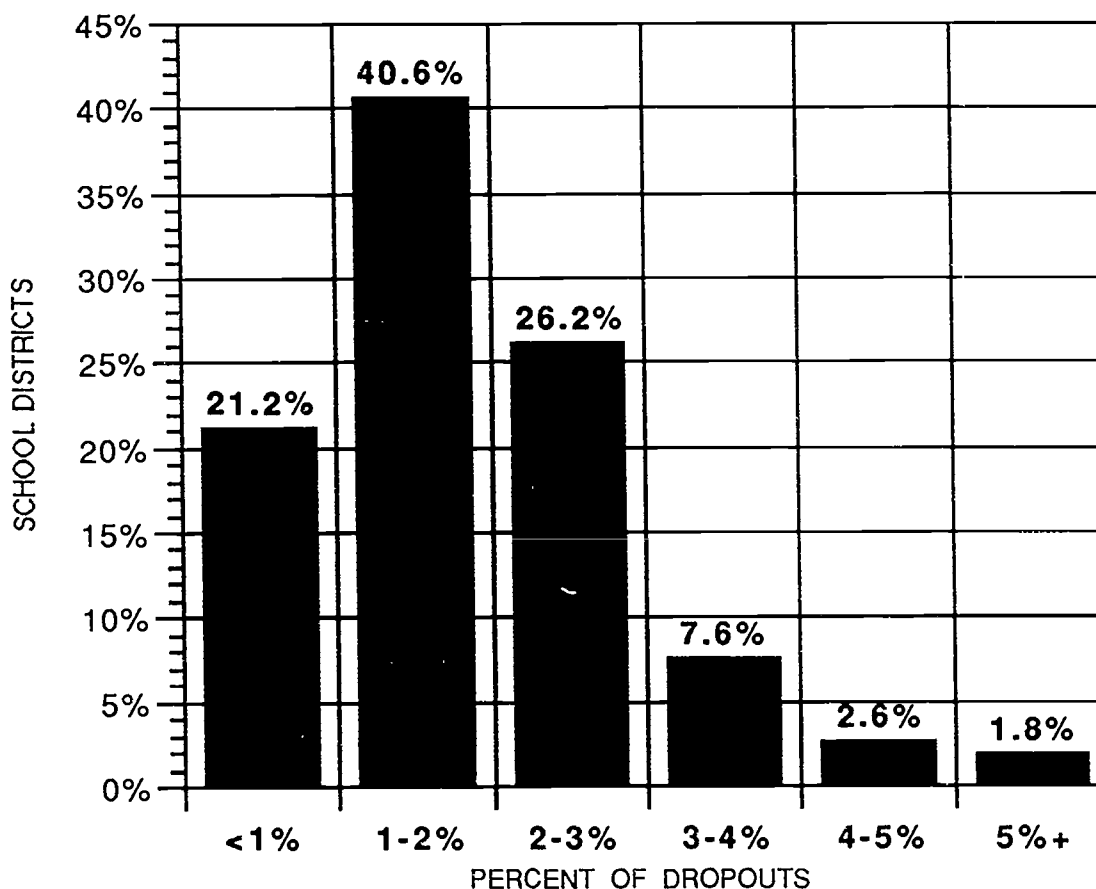


Reasons for Dropping Out
Student reports of the reasons they leave school tend to remain fairly constant over time.

PA Department of Education

School Districts By Percent of Dropouts

1989-90



Note: State dropout rate was 2.93%.

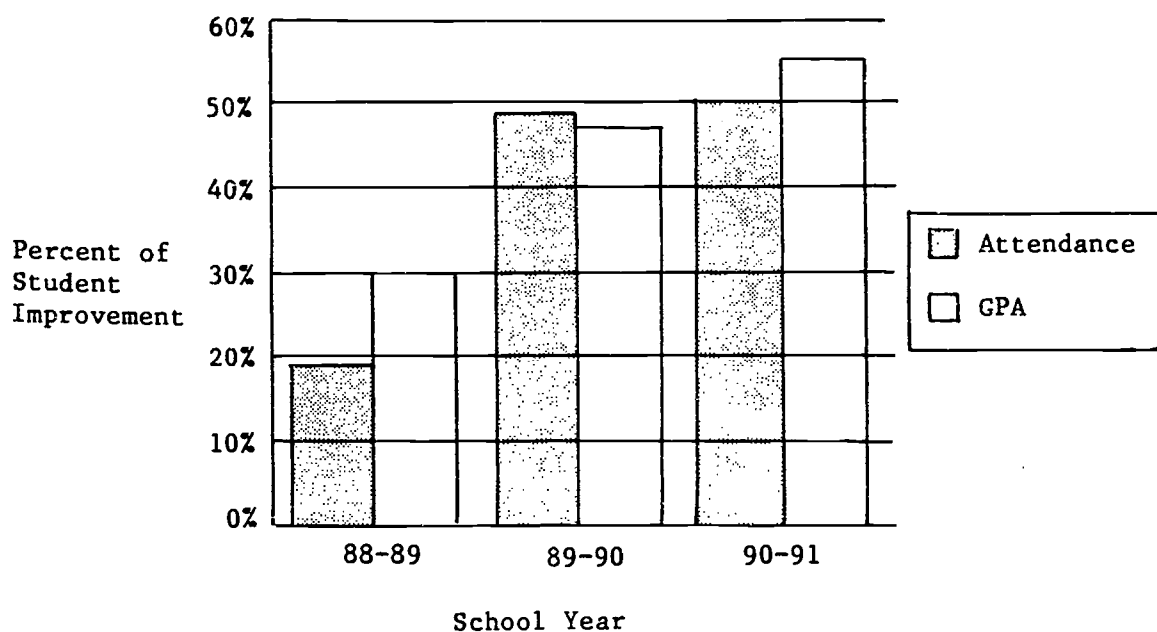
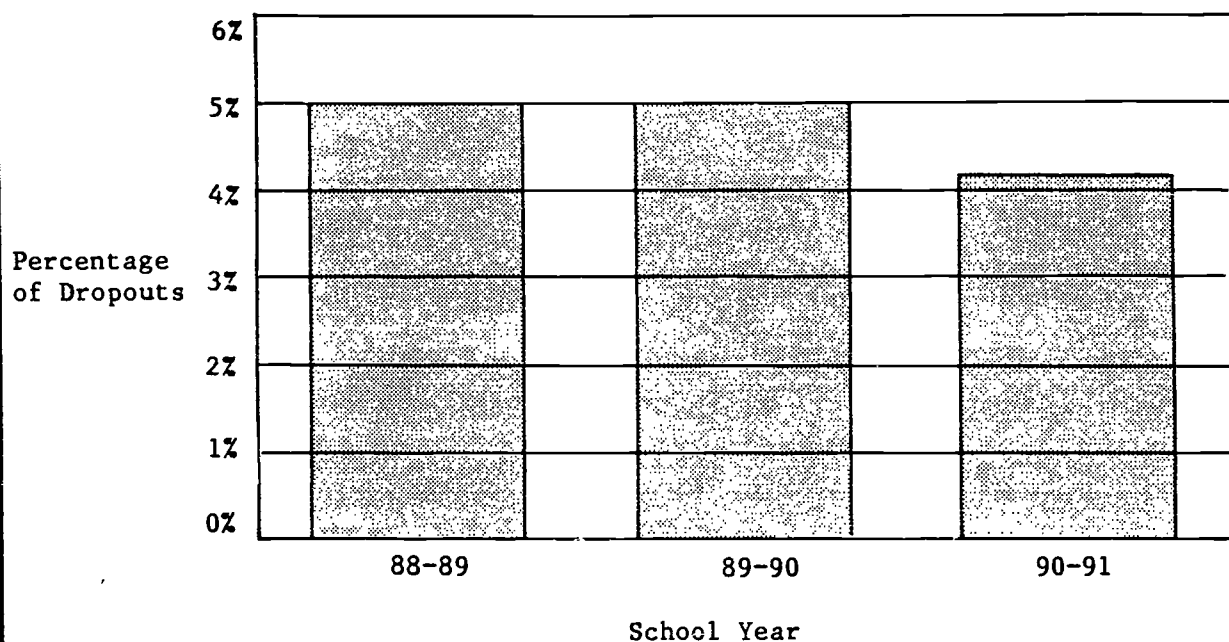
School Districts by Percent Dropouts

This chart identifies the percentage of school districts having particular dropout rates. For example, 40.6% of school districts had between 1-2% dropout rates in the 1989-90 school year. Almost 88% of school districts had below average dropout rates. Thus, while dropouts can be a problem in smaller, more rural districts, they are predominately a problem for larger school districts.

Note: The total dropouts refer to numbers and percents for one year in grades 7 - 12 and not total numbers or percents for graduating classes.

PA Department of Education

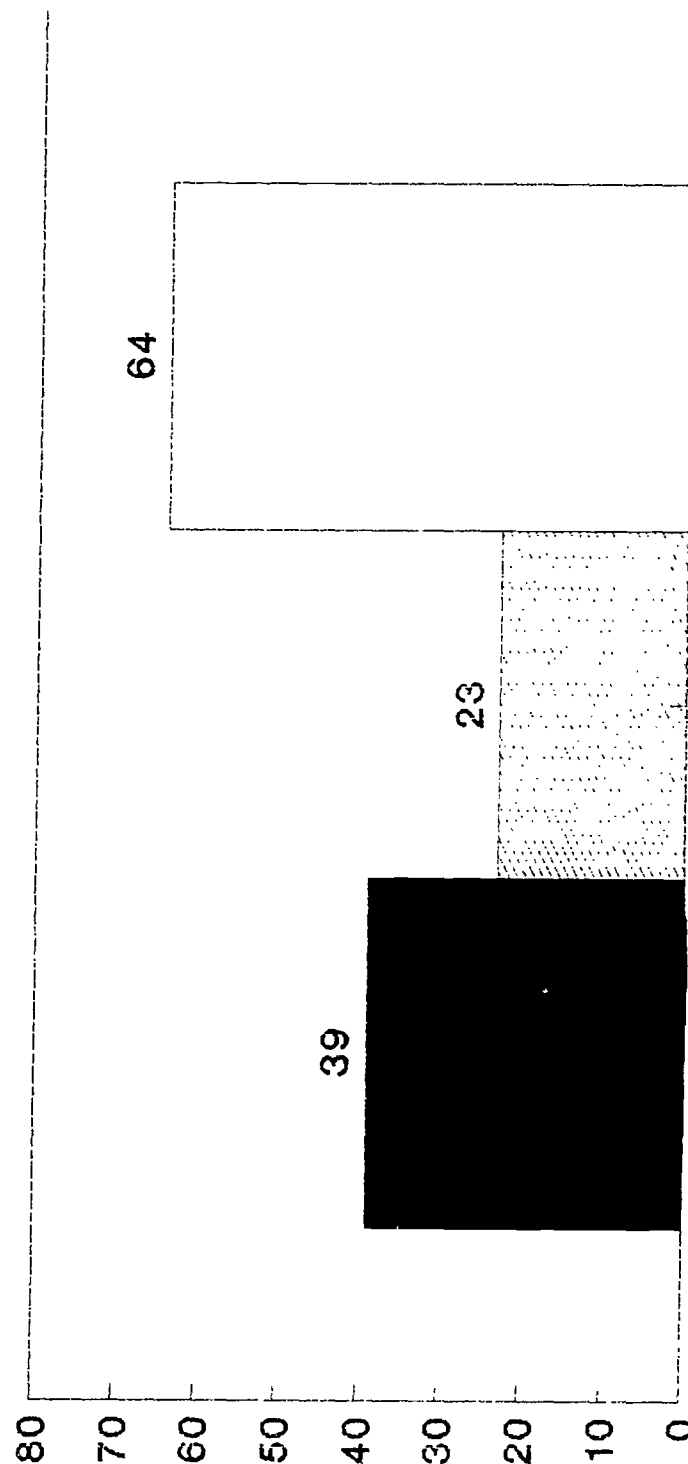
Statewide Dropout Prevention Program Impact on Student Outcomes



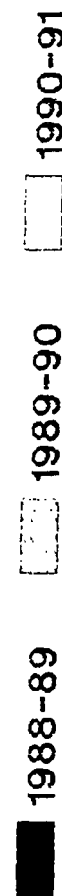
PA Department of Education

The statewide dropout prevention program is focused on 37 high dropout school districts. These charts indicate three-year percentage improvements by participating students in attendance, grade point average (GPA), and reductions in overall dropout rates.

School Performance Incentives Dropout Rate Improvements



Number of Schools Receiving Awards



PA Department of Education

School Performance Incentives -- Dropout Rate Improvements

Schools which improve their dropout rate performance receive incentive grants from the Department of Education. Since the beginning of the program in 1988, the number of schools receiving awards has increased by 60%.

TEEN BIRTHS IN PENNSYLVANIA

| Year | Live Births | |
|------|-------------------|--------|
| 1985 | Under 18 | 6,878 |
| | 18 & 19 year olds | 11,600 |
| | TOTAL | 18,478 |
| 1986 | Under 18 | 6,791 |
| | 18 & 19 year olds | 11,360 |
| | TOTAL | 18,151 |
| 1987 | Under 18 | 6,752 |
| | 18 & 19 year olds | 10,958 |
| | TOTAL | 17,710 |
| 1988 | Under 18 | 6,876 |
| | 18 & 19 year olds | 11,211 |
| | TOTAL | 18,087 |
| 1989 | Under 18 | 6,977 |
| | 18 & 19 year olds | 12,050 |
| | TOTAL | 19,027 |

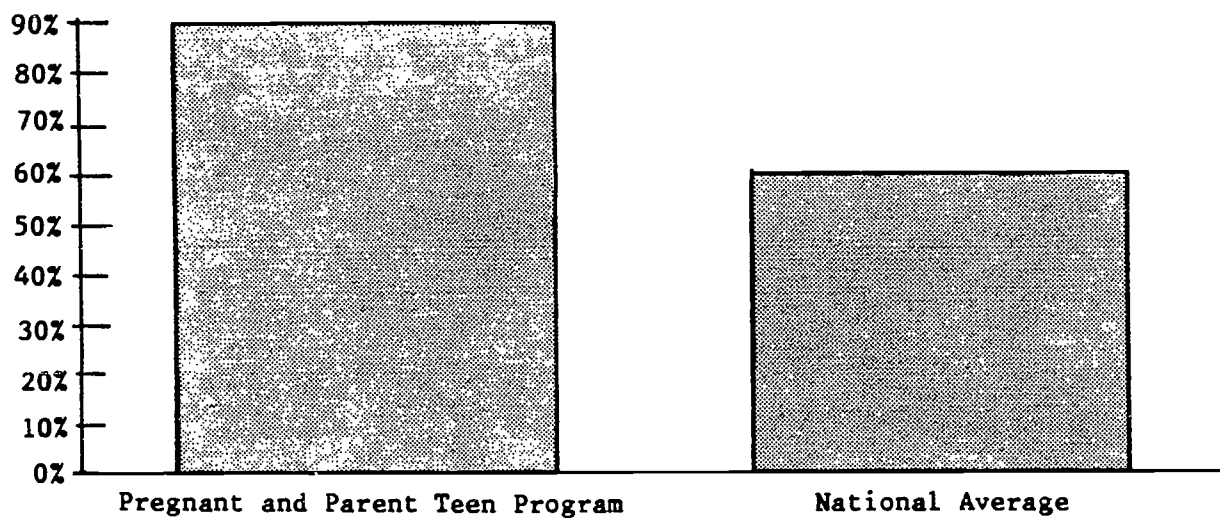
PA Department of Health

Teen Pregnancies

After slight declines from 1985 through 1987, live births to teens began to increase in 1988 and 1989 at the same time the number of teens in the childbearing age group was declining. Pregnancy has been documented as a significant reason for female students deciding to leave school.

PREGNANT AND PARENTING TEEN PROGRAM 1989-90

SCHOOL COMPLETION RATE: STATE VS. NATION



Pregnant and Parenting Teen Program

While the national average completion rate for pregnant girls is less than 60%, students participating in Department of Education programs average a completion rate of better than 90%.

PA Department of Education

UNITED STATES AND PENNSYLVANIA DATA ON ADULTS COMPLETING THE GENERAL EDUCATION DEVELOPMENT TEST

| Year | U.S. Number of People Tested | Percent Meeting Score Requirements | PA Number of People Tested | Percent Meeting Score Requirements |
|-------------|---|---|---|---|
| 1985 | | | 24,767 | 71% |
| 1986 | | | 26,909 | 73% |
| 1987 | 729,314 | 67% | 28,682 | 73% |
| 1988 | 701,314 | 64% | 18,491 | 68% |
| 1989 | 645,461 | 59% | 21,258 | 65% |
| 1990 | 727,285 | 60% | 25,030 | 69% |

PA Department of Education

Adults Completing the General Education Development Test

In order to receive a GED, all candidates must complete a battery of tests. A GED is awarded upon the successful completion of the tests.

Summary and Conclusion

Goal 2 — School Completion

The National Goals Panel rejected state-by-state data on dropout rates because no consistent format exists. In Pennsylvania, we calculate dropouts and dropout rates based on the number of students who leave school in any given year in grades 7-12. Using this method, in the 1989-90 school year, some 2.93% of Pennsylvania students dropped out. Other approaches to calculating dropout rates often subtract the number of seniors from the number of freshmen or seventh graders, and derive a percentage. The federal government's Wall Chart, which has been discontinued, used the 12th minus 9th grade calculation to derive graduation rates. Using this approach, Pennsylvania's most recent graduation rate was listed as 78%, which was slightly better than the national average.

While dropout rates often fluctuate due to factors beyond the control of the schools, Pennsylvania's dropout prevention and teen parenting programs appear to have had some success in helping high dropout schools to improve their rates and to increase school performance for many of the students they serve. Therefore, these efforts should be considered for expansion. Pennsylvanians also outperform the nation on average with regard to success in gaining General Education Development (GED) diplomas. In the future, data systems will be better able to consolidate high school graduates and GED attainment to create a more accurate picture of success in obtaining a high school diploma or its equivalent.

In addition to expanding efforts to enhance dropout prevention and GED attainment, programs designed for this purpose should stress opportunities for and responsibilities of students to themselves, their families, and their communities. Further, the business community can be of immeasurable benefit to dropout prevention efforts not only by hiring economically disadvantaged students, but also by reinforcing the value of studies through monitoring student employees' academic progress and stressing its importance by rewarding school success with raises, promotions, or other incentives.

Current Efforts to Meet Goal 2

There are a number of important activities and programs underway in the Commonwealth to move us in the direction of attaining Goal number two. They include:

- **Successful Students Partnership** — The Statewide dropout prevention program is now operating in 37 school districts with high dropout rates. Two-thirds of participating districts have shown improvement.
- **Teen Pregnancy and Parenting** — Programs operating in 65 local education agencies provide a wide array of services for pregnant and parenting teens, including health screening and referral, parenting education, personal and vocational counseling, specialized education and vocational programming, food and nutrition education, and access to quality child care. The retention rate for participants is 91%.
- **Summer Training and Education Program (STEP)** — is a nationally demonstrated intervention strategy designed to assist at-risk 14 and 15 year-olds to overcome summer learning loss and succeed in school. STEP provides a comprehensive program of summer employment, academic remediation, life skills training, and school-year support for almost 1500 youth in more than two dozen local education agencies in 12 JTPA Service Delivery Areas across the Commonwealth.
- **Jobs for Pennsylvania Graduates (JPG)** — JPG targets older high school youth with few marketable skills, provides counseling and job readiness services, and intensive job development, placement, and follow-up. Currently, programs are operating in 11 school districts serving 350 youth in eight Service Delivery Areas.
- **GED Attainment** — Pennsylvania's state-funded General Education Development (GED) equivalency degree program has issued more than 63,000 GED diplomas to residents over the last four years.

- **Public Library Resources** — The State Library provides grants to all public library districts to encourage public libraries to work with schools and other community agencies serving youth. Public libraries provide access to information in all areas in a variety of formats. Students can acquire information on educational requirements for careers, receive help with homework, or study for a GED exam.

Future Directions to Meet Goal 2

- **Coordination of Services** — Coordinate and integrate education, training and welfare services designed to keep students in school and help them to graduate successfully.
- **Extend Dropout Prevention Efforts** — Establish within every school district efforts designed to move students successfully towards graduation.
- **School and Work** — Build closer working relationships between schools and employers, designed to underscore the value of educational attainment and the importance of staying in school and doing well.
- **Improve Data Collection** — Develop improved methodology for reporting school dropouts, and for tracking dropouts who later return to education to attain a high school or GED diploma.

GOAL 3:

STUDENT ACHIEVEMENT AND CITIZENSHIP

“By the year 2000, American students will leave grades four, eight, and twelve having demonstrated competency in challenging subject matter including English, mathematics, science, history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.”

Objectives:

- “The academic performance of elementary and secondary students will increase significantly in every quartile, and the distribution of minority students in each level will more closely reflect the student population as a whole.”
- “The percentage of students who demonstrate the ability to reason, solve problems, apply knowledge, and write and communicate effectively will increase substantially.”
- “All students will be involved in activities that promote and demonstrate good citizenship, community service, and personal responsibility.”
- “The percentage of students who are competent in more than one language will substantially increase.”
- “All students will be knowledgeable about the cultural diversity of this nation and about the world community.”

Outcomes and Measures Relating to Goal 3 — Student Achievement and Citizenship

This section includes data bearing on Goal 3 and its related objectives. Measures detailed include information such as:

- statewide reading and mathematics assessment aggregate data
- Scholastic Aptitude Test (SAT) scores
- numbers of school receiving performance awards for improvements in state assessment scores and SAT scores
- Advanced Placement scores
- vocational skills test scores

STATEWIDE PUBLIC SCHOOL AGGREGATE DATA

| | GRADE 3 | | GRADE 5 | | GRADE 8 | |
|----------------------------------|---------|-------------|---------|-------------|---------|-------------|
| Percent Above Cut Score | Reading | Mathematics | Reading | Mathematics | Reading | Mathematics |
| 1985-86..... | 75.8 | 81.2 | 78.6 | 80.8 | 78.3 | 75.2 |
| 1986-87..... | 76.8 | 83.4 | 74.0 | 84.0 | 75.3 | 74.9 |
| 1987-88..... | 76.4 | 86.0 | 76.4 | 73.2 | 80.8 | 78.3 |
| 1988-89..... | 78.2 | 84.8 | 74.0 | 78.0 | 79.4 | 76.5 |
| 1989-90..... | 83.5 | 83.0 | 79.5 | 84.3 | 82.4 | 84.4 |
| 1990-91..... | 83.6 | 79.8 | 79.5 | 83.3 | 84.9 | 83.3 |

PA Department of Education

Statewide Public Schools TELLs Aggregate Data

The statewide reading and mathematics tests (Testing for Essential Learning and Literacy Skills — TELLs) measure whether schools have brought students to a state-established minimum level of performance in basic mathematics and reading skills by March of third, fifth and eighth grades. This chart summarizes the results of that testing for the six-year life of the test. Caution should be used when analyzing the data since they describe the results of tests on only two subjects which are administered in three grades and do not describe the overall quality of the schools. Comparisons with TELLs results from previous years should be made with special caution, if at all, because (1) the content of the tests was changed over the years from that of previous years. In particular, some items which measure various types of "higher order thinking skills" were added in order to cover a broader range of competencies; (2) there may be true differences in ability levels and academic attitudes in classes of students from one year to the next as the result of demographic changes; and (3) local events and/or the atmosphere surrounding the testing will change from year-to-year. However, these results do indicate how well on the average students performed in a given year on the TELLs instruments.

AVERAGE SAT SCORES

United States

| Year | Verbal Score | Math Score |
|------|--------------|------------|
| 1988 | 428 | 476 |
| 1989 | 427 | 476 |
| 1990 | 424 | 476 |
| 1991 | 422 | 474 |

Source: The College Board

Pennsylvania

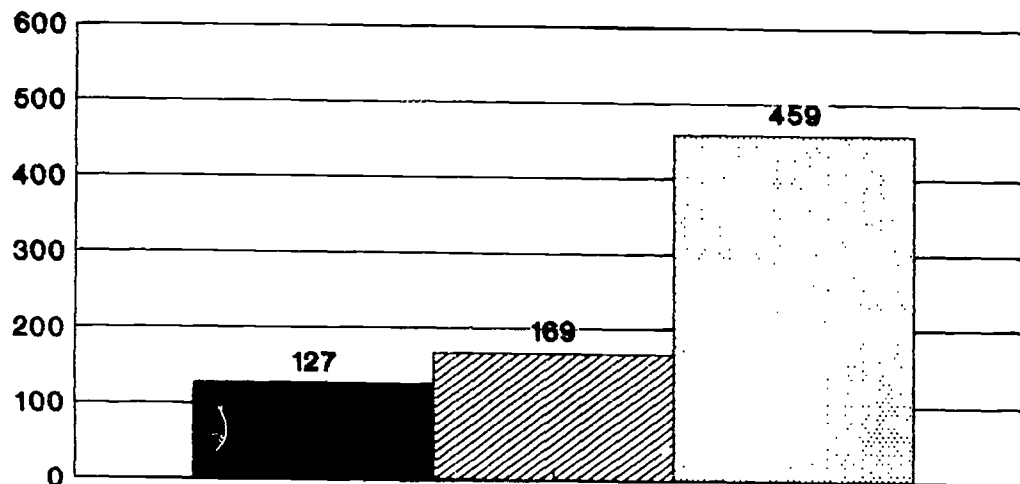
| Year | Number of SAT Takers | % of High School Seniors Taking SAT | Verbal Score | Math Score |
|------|----------------------------|--|-----------------|---------------|
| 1982 | 87,039 | 52% | 424 | 461 |
| 1988 | 92,123 | 63% | 424 | 462 |
| 1989 | 87,610 | 63% | 423 | 463 |
| 1990 | 83,036 | 64% | 420 | 463 |
| 1991 | 82,022 | 67% | 417 | 459 |

Source: The College Board

Scholastic Aptitude Tests

Scholastic Aptitude Tests are designed to predict how well high school students will perform at institutions of higher education. They do not measure what a student has learned. Rather, they suggest how well a student is capable of learning and doing in higher education. However, with motivation and support students with low SAT scores can be successful in higher education. This chart depicts number and percentage of SAT takers and results over several years. It is important to note the recent growth in percentage of SAT takers, which may suggest growing interest among more students in attending postsecondary education.

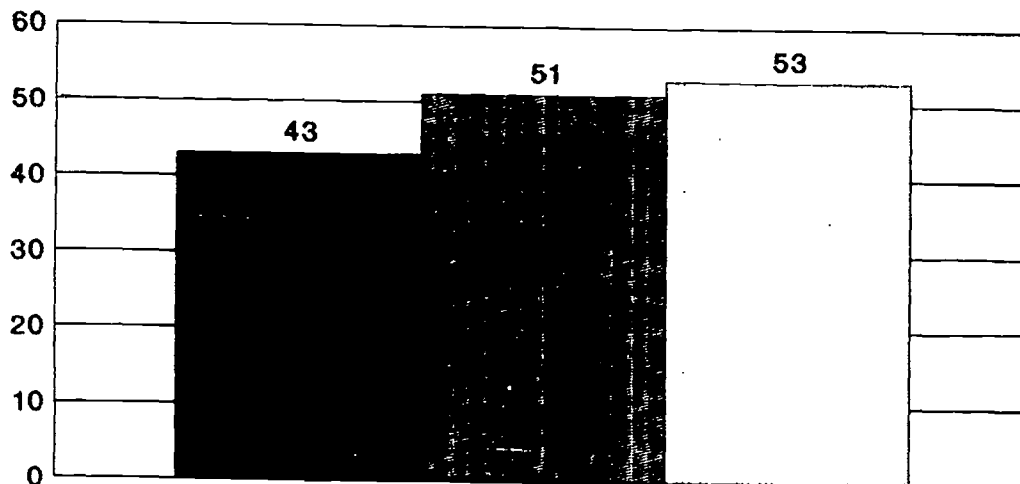
School Performance Incentives TELLS Improvements



Number of Schools Receiving Awards

1988-89 1989-90 1990-91

School Performance Incentives SAT Improvements



Number of Schools Receiving Awards

1988-89 1989-90 1990-91

School Performance Incentives -- TELLs and SAT Improvements

Schools which improve their TELLs and SAT scores receive incentive grants from the Department of Education. The number of schools receiving awards for improved TELLs and SAT scores has increased since the beginning of the program in 1988.

COLLEGE BOARD ADVANCED PLACEMENT EXAMS

| Subject | U.S. Students Taking Exam | Scored Qualified Or Above | PA Students Taking Exam | Scored Qualified Or Above |
|----------------------------|------------------------------------|---------------------------------|----------------------------------|---------------------------------|
| U.S. History | 92,449 | 55% | 3,553 | 56% |
| English Language | 25,405 | 61% | 851 | 66% |
| English Literature | 97,733 | 72% | 4,036 | 74% |
| European History | 24,180 | 74% | 1,215 | 74% |
| Art History | 3,109 | 78% | 61 | 70% |
| Art Studio (General) | 2,722 | 77% | 90 | 83% |
| Music Theory | 1,121 | 67% | 42 | 74% |
| French | 9,996 | 65% | 431 | 55% |
| German | 2,228 | 67% | 139 | 55% |
| Spanish | 21,141 | 78% | 467 | 59% |

Source: The College Board

College Board Advanced Placement Exams

Advanced Placement examinations are administered on a voluntary basis to high school students who complete advanced coursework in a variety of subjects. If scores on these exams are at high enough levels, then students may be granted credit in that subject by an institution of higher education. These data for English, history, arts, and language show the number of Pennsylvania students taking the AP exams in 1990, and the percentage that scored well enough to earn a recommendation for credit and/or advanced placement. (Math and science scores are included in Goal 4.)

PENNSYLVANIA SKILLS CERTIFICATE PROGRAM

Four-Year Summary

| Year | No. of Schools | No. of Tests Administered | No. of PSC Awarded | % of Students Receiving PSC |
|------|-------------------|---------------------------------|--------------------------|-----------------------------------|
| 1988 | 77 | 3,458 | 1,389 | 40% |
| 1989 | 116 | 5,539 | 2,106 | 38% |
| 1990 | 94 | 4,500 | 1,754 | 39% |
| 1991 | 76 | 3,214 | 1,307 | 40% |

Pennsylvania Department of Education

Pennsylvania Skills Certificate for Vocational Students

The Pennsylvania Skills Certificate program is a special award designed to recognize high achievement by vocational education students. Offered on a voluntary basis by vocational schools and school districts, competencies are measured in 58 separate occupational areas. To receive the Skills Certificate, a student must pass a written examination testing understanding of principles and problem solving in the context of vocational training, and also score highly on a performance test designed to assess students' abilities to do the job. The declines in numbers of participating schools and students in the last two years could reflect the fact that schools must now bear the costs of their students' tests, whereas in 1988 and 1989 the state covered these costs.

Summary and Conclusion

Goal 3 — Achievement and Citizenship

Goal 3 data probably come the closest to the types of outcome measures envisioned by the National Goals Panel in measuring progress. This is to be expected, since the Goal relates in large part to quantifiable results in specific academic subjects. The several data elements arrayed in this section, e.g., TELLS, SATs, and Advanced Placement, are long-standing measures for which longitudinal data are available. Over time, such trend data can be developed for fuller and more appropriate measures. In fact, work now underway will substantially change the way Pennsylvania monitors and assesses student and school performance. The Commonwealth will establish standard competencies for students, measure student attainment with appropriate instruments, and expect school districts, with considerable local flexibility to address these issues, to produce students who will meet state standards. For now, however, the data included in this report give us some important information.

With regard to TELLS, since its first administration in 1986, between 75-86% of Pennsylvania 3rd, 5th, and 8th graders have demonstrated at least minimum competency in reading and mathematics. Although TELLS instruments were designed initially to identify students who needed help in reading and math, more recently the TELLS tests have been changed to include more challenging material. In light of this change towards more demanding content, the consistency of scores over time may be some cause for optimism regarding these skills levels. With the revamping of the statewide assessment, including the addition of a writing component which has already been field-tested, Pennsylvania should be well-positioned by mid-decade to know with some degree of confidence how students are progressing toward Goal 3.

Scores from both the Advance Placement and Scholastic Aptitude Tests instruments do not represent the entire population of students. Further, the SAT is not even a measure of achievement (what has been learned), but rather a predictor of aptitude (potential to do well in college). While it is disappointing to see Pennsylvania scores continue to decline, this phenomenon is explainable to some extent by the growth in the overall percentage of test-takers. Still, the scores are a clear indicator that, as more students express interest in postsecondary education, we must upgrade the educational skills of all of our students.

Advanced Placement scores are indicators of how much our best academic students have learned in particular subjects. Scoring well (3 or better out of a possible 5) can result in credit and/or placement in more advanced courses in college. In most instances, Pennsylvania students do well compared to students nationally. Because more challenging material and high expectations for students often bring about better performance, the Pennsylvania Department of Education has been encouraging more schools to offer advanced placement coursework.

Another important indication of progress may lie in the growing number of schools which are winning awards through Pennsylvania's School Performance Incentive program, which rewards significant improvement in TELLS scores and in percentages and scores on SAT exams, as well as in reducing dropout rates (see Goal 2). In addition to the growth in awards within these three categories, the number of schools receiving awards has more than doubled to 561, and the number of districts in which schools have received awards, has grown from 130 to 308. In all, since its inception in 1988, the School Performance Incentive program has provided about 1,000 cash grants to schools demonstrating improved performance.

The use and administration of the vocational skills assessment are relatively new, and not yet widely adopted by schools. These tests provide, for the first time, a measure of how well vocational students can perform specific skills necessary to work in their chosen field of training. Expanding the use of these instruments is an area where state leadership can usefully be exerted.

Goal 3 also relates to citizenship and community service. As the Goals Panel has discussed, there are few good direct measures of these concepts. Pennsylvania's PENNSERVE program is among the very best efforts in the nation to stimulate citizen and community service. In future years, we will find appropriate ways to report on the effectiveness of school and community service activities, and to demonstrate their effectiveness in engendering and fostering good citizenship.

Finally, it is important to stress two issues which are not directly referenced in Goal 3, but which are essential to its attainment. First, central to all of Goal 3, and to the others as well, is a highly trained and motivated cadre of professional teachers. Continually striving to strengthen the teaching force is essential to any hope for progress. Issues relating to strengthening the quality of teacher preparation and inservice training will be addressed in the near future as the State Board of Education rewrites its regulations governing these matters.

Second, there is now a strong consensus of opinion shared by educators and business leaders alike on the need for a fundamental change, a "restructuring," in the way we provide instruction in our schools. This view suggests that students need to be taught to take more responsibility for their own learning, and that all students must be expected and helped to learn at much higher levels. New approaches, such as Re:Learning (see Current Efforts), are being successfully mounted in Pennsylvania and elsewhere.

Current Efforts to Meet Goal 3

- **School Performance Incentives** — Described in the Summary and Conclusions section, the School Performance Incentive program rewards strongly improving schools for success in stemming dropout rates, increasing student participation in and/or scores on SATS, and increasing scores on statewide assessments (TELLS).
- **Student Assessment** — Pennsylvania's mathematics and reading assessment instruments (TELLS) have been upgraded to measure higher order skills. Revisions have been made which enable Pennsylvania to move beyond the former approach which focuses solely on minimum competencies. Also, the Department of Education has field tested a writing sample instrument, which will be put in place in the near future. Further, new, more comprehensive approaches to assessment are being considered by the Department and the State Board of Education.
- **School Reports** — The Department of Education is developing an accountability system of School Reports, which will array information useful to school districts in identifying their strengths and weaknesses, and which will also enable the public to understand how their schools are performing. The Reports should assist schools to build on successes, and to identify and address areas of weakness.
- **Enhancing the Professionalism of Teachers** — Pennsylvania has under-taken a number of reform measures, based largely on the Carnegie Forum report entitled *A Nation Prepared*. Good examples include:
 - **Lead Teachers** — More than 5,000 teachers have received training as Lead Teachers through nine Lead Teacher Centers and grants to individual districts and consortia.
 - **Continuing Professional Development** — Since 1988, the Commonwealth has required every school district to plan for and provide opportunities for teachers to gain additional professional knowledge and to involve teachers in developing those.
 - **Loan Forgiveness for Urban and Rural Teachers** — the Commonwealth provides college loan forgiveness to teachers who agree to teach in designated urban and rural schools.
 - **Induction** — Since 1986, all new teachers must receive one year of induction or mentoring, under the guidance of an experienced teacher.
 - **Teacher salary increases** — In 1987 the minimum teacher salary increased to \$18,500.
- **Re:Learning** — Re:Learning is perhaps the best known example of school restructuring. Pennsylvania is one of seven states participating in this Education Commission of the States activity designed to transform schools along the lines of the Ted Sizer "Essential Schools" model.

- **PennSERVE** — Pennsylvania is a national leader in promoting youth and community service through PennSERVE. Grants have been awarded to more than 60 schools to begin or expand service programs. Funds from PennSERVE, the Pennsylvania Conservation Corps, and JTPA help to support 7 full-time, year-round service conservation corps, and 26 Summer Youth Service Corps. The Pennsylvania Literacy Corps provides funds and other assistance to 30 state and federal Literacy Corps on college campuses throughout the Commonwealth. Also, this year Pennsylvania launched the Institute for Service Learning, which acts as a national clearinghouse for information and training to educate teachers in the value of work and service learning.

Future Directions to Meet Goal 3

- **Student Learning Outcomes** — Develop learning outcomes for all students, provide school districts regulatory flexibility in formulating appropriate local education programs and strategies, and regularly measure progress with appropriate assessments.
- **Pennsylvania Assessment System** — Replace the current statewide assessment program (TELLS) with a more rigorous and challenging set of reading and mathematics assessments administered in grades 5, 8 and 11, and of writing in grades 6 and 9.
- **Expanded School Performance Incentives** — Establish a more comprehensive system of reward for schools showing strong improvement in academic achievement and related outcomes.
- **Promote Restructured Schools** — Through Re:Learning and other restructuring models, assist local schools to reformulate their educational programs in order to deliver higher levels of learning for all students.
- **End "General Track" Studies** — Ensure that all students are pursuing either high quality occupational-technical training or college preparatory coursework.
- **School-Based Service** — Strongly encourage school districts to offer all students the opportunity to be engaged in service to other students and/or to residents of their community.
- **Expand Instructional Support Teams** — Substantially expand Instructional Support Team efforts designed to help teachers work with special needs students in regular classrooms, to cover all school districts.
- **Improve Data Collection** — Strengthen data collection efforts to include school district student assessments of basic and higher order skills, and establish strategies for measuring student participation in community service activities.

GOAL 4:

SCIENCE AND MATHEMATICS

“By the year 2000, U.S. students will be first in the world in mathematics and science achievement.”

Objectives:

- “Math and science education will be strengthened throughout the system, especially in the early grades.”
- “The number of teachers with a substantive background in mathematics and science will increase by 50%.”
- “The number of U.S. graduate and undergraduate students, especially women and minorities, who complete degrees in mathematics, science, and engineering will increase significantly.”

Outcomes and Measures Relating to Goal 4 — Science and Mathematics

This section includes data bearing on Goal 4 and its related objectives. Measures detailed include information such as:

- performance on the National Assessment of Education Progress math exam
- Advanced Placement scores on mathematics and science-related exams
- proportions of students taking math and science
- time spent on math and science on elementary classrooms
- percentages of minority teachers of math, science, and other subjects
- other information on degrees, credentials, and certificates issued to teachers and others in fields relating to math and science.

National Assessment of Education Progress — 8th Grade Mathematics

For the first time in 1990, the National Assessment on Education Progress administered assessments designed to produce state level attainment results. This first NAEP state assessment measured understanding of 8th grade mathematics. Approximately 2500 8th graders in approximately 100 schools in each state were tested. Here is a brief summary of results for Pennsylvania and the nation:

- In Pennsylvania, 98% of participating 8th grade students appear to have mastered skills involving simple additive reasoning and problem solving with whole numbers. Nationally, the figure is 97%.
- In Pennsylvania, 69% of participating Pennsylvania 8th graders showed that their mathematics understanding included consistent success with multiplication and division of whole numbers, or problems involving more than one step. Nationally, the figure is 64%.
- In Pennsylvania, 15% of participating 8th graders appear to have acquired reasoning and problem-solving skills involving fractions, decimals, percents, elementary geometric properties, and simple algebraic manipulations. Nationally, the figure is 12%.

In Pennsylvania, 36.2% of the students in Grade 8 do not reach the basic level of competency in mathematics. This is similar to the percentage for the Northeast region (33.1%), but better than that for the nation as a whole (41.8%). Over two-fifths (44.7%) of the students in Pennsylvania are performing at the basic level. Just under one-fifth (18.2%) of the students in this state are able to satisfy the requirements set for the proficient level, while 0.9% meet the standards set for the advanced level.

Over three-fifths (63.8%) of Pennsylvania's students are at or above the basic level. This is higher than the comparable figure for the nation as a whole. One-fifth (19.1%) of Pennsylvania's Grade 8 students are at or above the proficient level and 0.9% of the students in Pennsylvania reach the advanced level. These two percentages are not significantly different from those for the Northeast region and the nation as a whole.

These percentages at or above the basic, proficient, and advanced levels means that nearly two-thirds of the public school students in Pennsylvania can be expected to perform basic arithmetical operations, with or without a calculator. These same students are also likely to have a conceptual understanding of fundamental mathematical concepts such as place value, order of operations, and fractions. The 19.1% of the students at or above the proficient level can be expected to solve more complex problems, classify geometric figures based on their properties, and show an understanding of the basic concepts of probability. The small percentage of students at the advanced level are likely to have a solid conceptual understanding of the interrelationships among fractions, decimals, and percents. They can also be expected to use scale drawings and solve problems involving concepts of probability.

National Assessment of Education Progress

COLLEGE BOARD ADVANCED PLACEMENT EXAMS

| Subject | U.S. Students Taking Exam | Scored Qualified Or Above | PA Students Taking Exam | Scored Qualified Or Above |
|----------------------|------------------------------------|---------------------------------|----------------------------------|---------------------------------|
| Biology | 32,643 | 62% | 1,160 | 50% |
| Chemistry | 19,289 | 64% | 920 | 60% |
| Math/Calc. AB | 62,676 | 72% | 2,662 | 69% |
| Math/Calc. BC | 13,096 | 82% | 399 | 85% |
| Physics B | 8,826 | 61% | 276 | 64% |
| Physics C Mech | 5,499 | 74% | 215 | 84% |
| Physics C E&M | 3,351 | 68% | 135 | 67% |

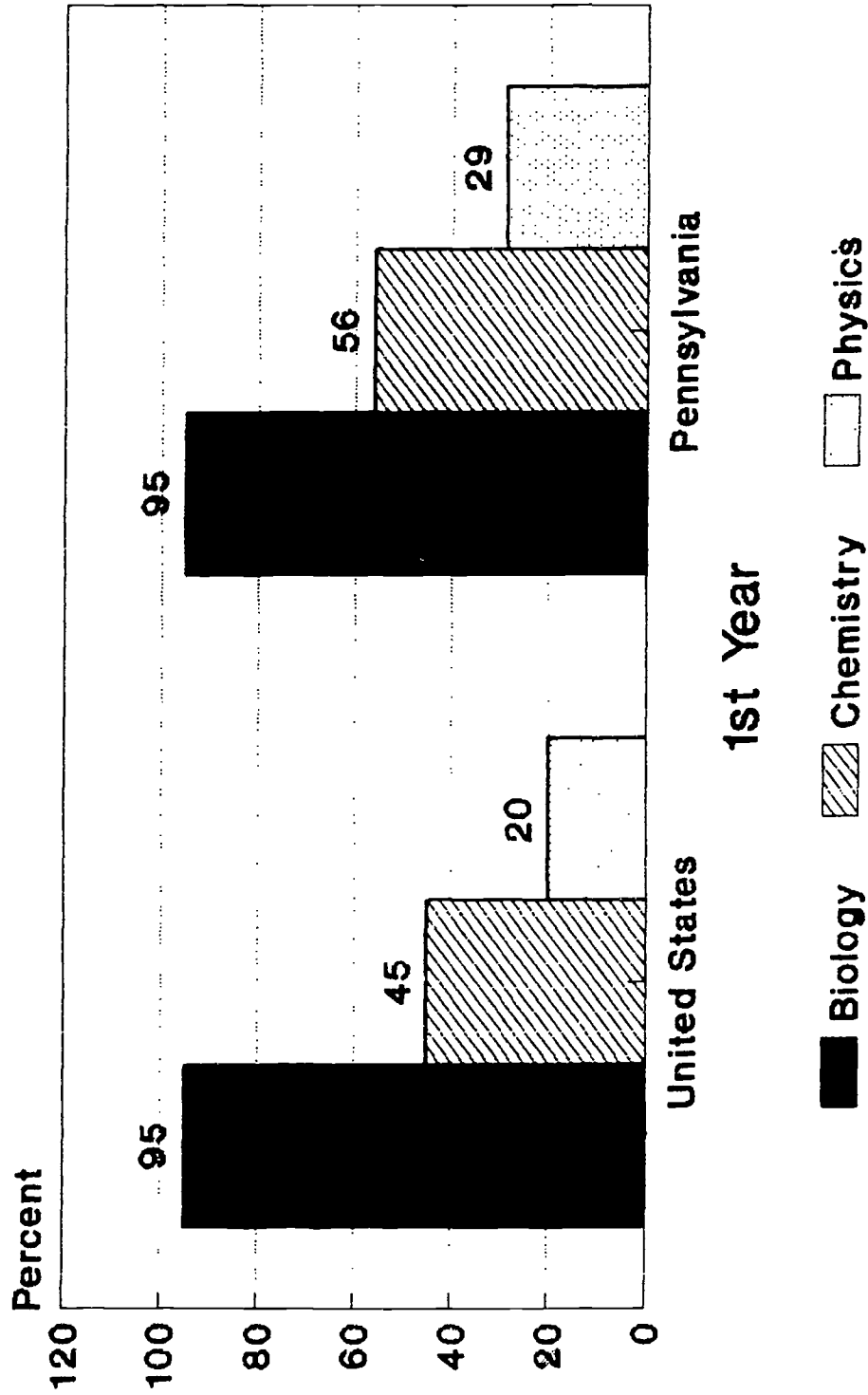
Note: Math/Calc. AB, Math/Calc. BC, Physics B, Physics C Mech, Physics C E&M are terms used to denote different areas emphasized in certain math and physics advanced placement exams.

Source: The College Board

Advanced Placement Exams — Mathematics and Science

This chart shows numbers of Pennsylvania students taking advanced placement exams in several areas of mathematics and sciences, and the percentage of those who scored well enough to be recommended for credit and/or advanced placement at a higher education institution.

Estimated Proportion of High School Students Taking Science Courses

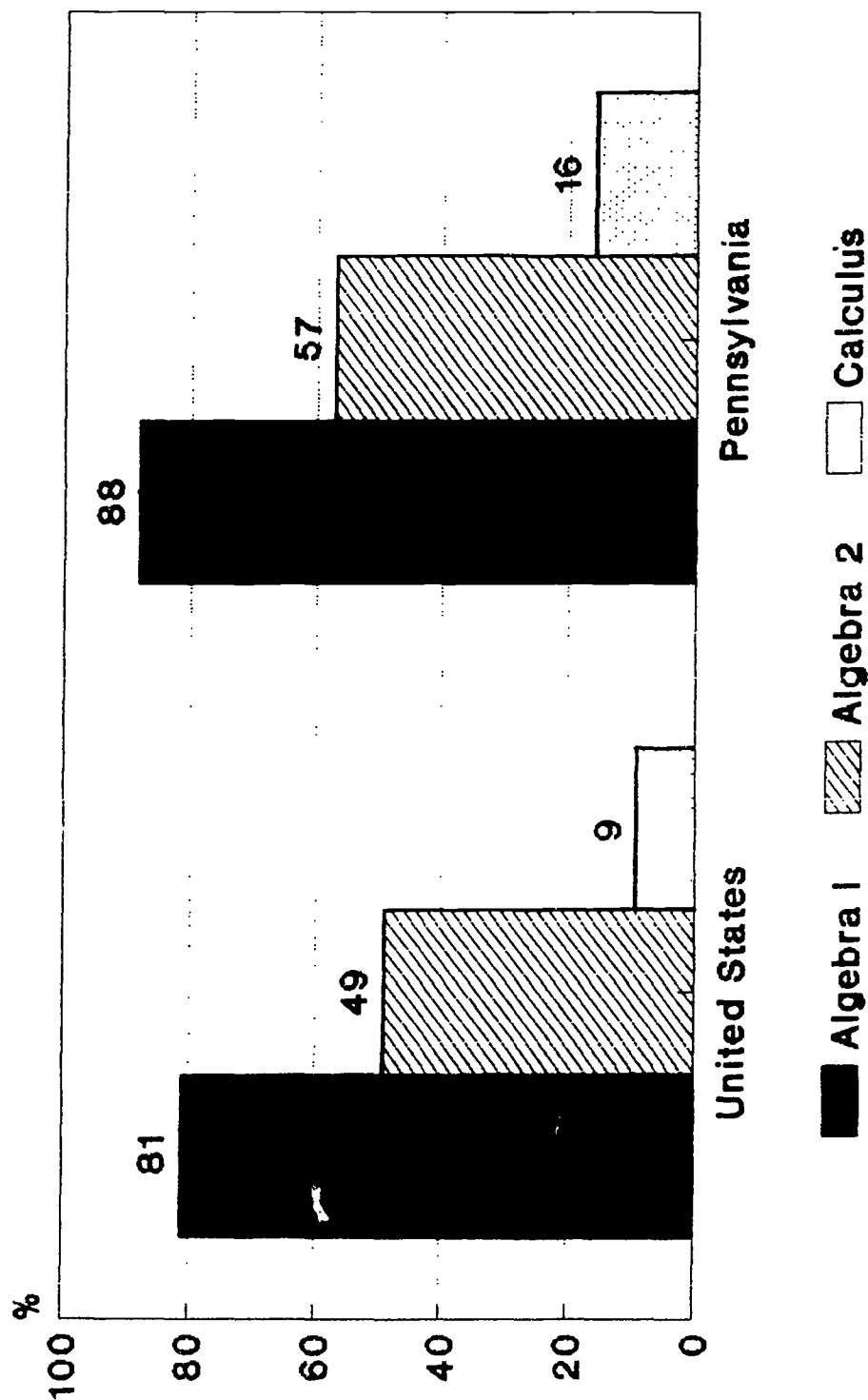


Estimated Proportion -- Sciences

Council of Chief State School Officers

Similarly, this chart indicates the percentages of students taking science courses such as biology, chemistry, and physics in Pennsylvania and the nation.

Estimated Proportion of Public School Students Taking Math Courses

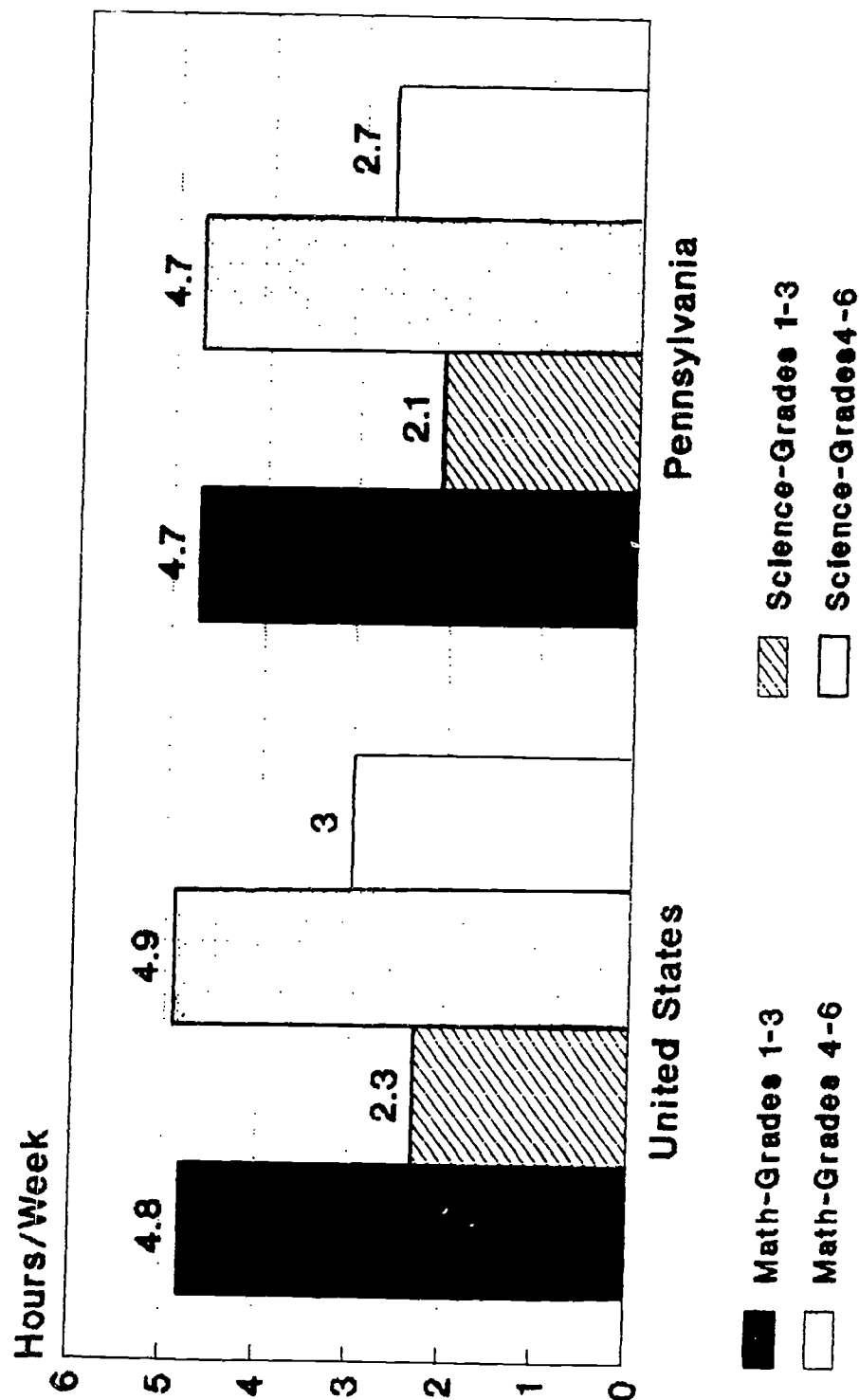


Council of Chief State School Officers

Estimated Proportion of Public School -- Math

This chart depicts percentages of Pennsylvania students taking algebra 1, algebra 2, and calculus, compared to students nationally.

Elementary Class Time on Math & Science

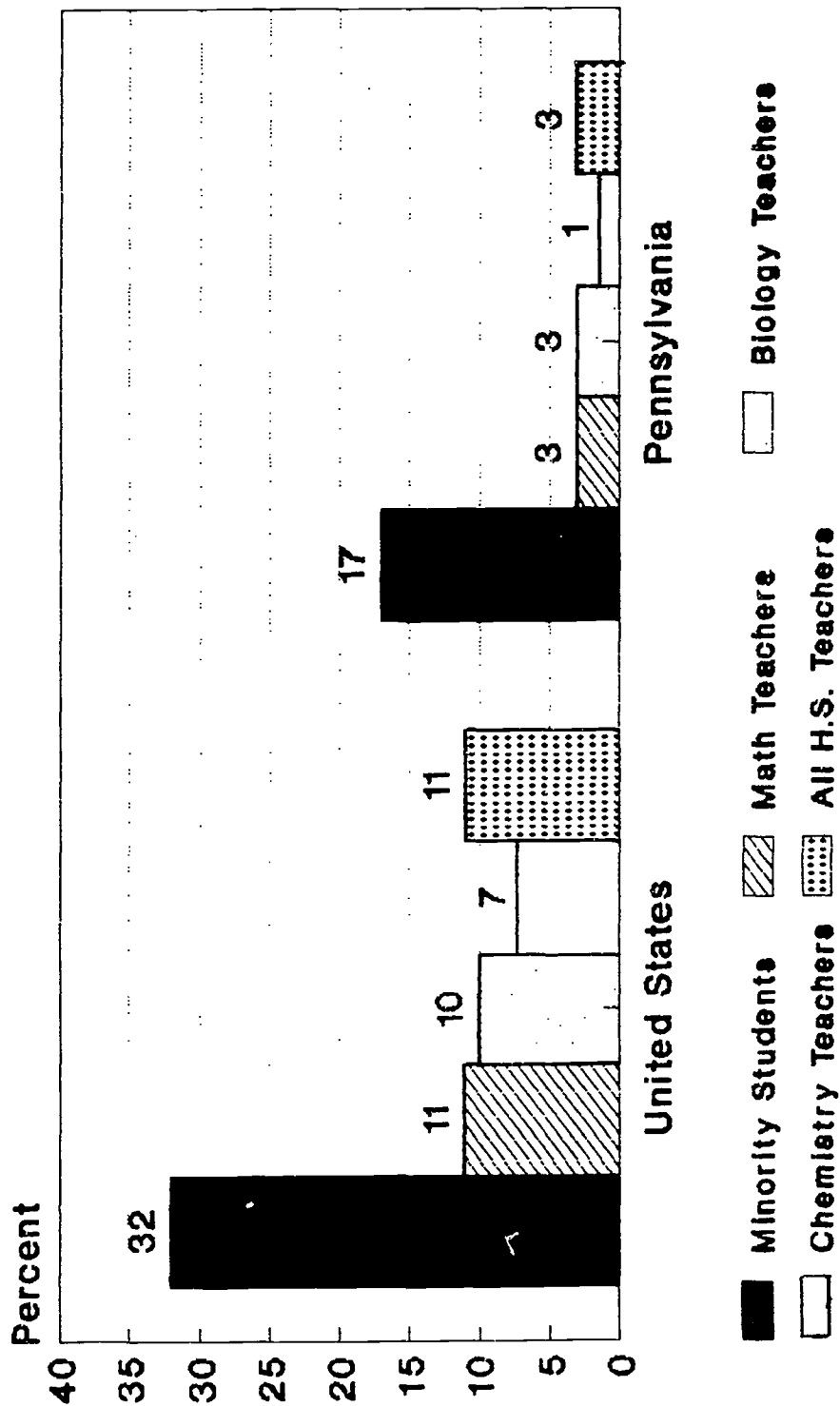


Elementary Class Time on Mathematics and Science

National Center for Education Statistics

This chart indicates average numbers of hours per week spent on math and science in elementary schools in Pennsylvania and nationally.

Minority Teachers in Math & Science By Minority Students in State



Minority Teachers in Math and Science

This chart arrays Pennsylvania and national data describing the percentages of minority students, and the percentages of minority teachers in math, sciences, and all subjects. Pennsylvania has a lower percentage of minority students than the nation as a whole, and also has a lower percentage of minority teachers.

Council of Chief State School Officers

PUBLIC SCHOOL TEACHERS SURVEY MATH AND SCIENCE 1987-88

The summaries below are based on sample survey which included 1,844 teachers from Pennsylvania (K-12); however, these estimates relate only to those teacher in grades 9-12 who teach math and science.

| Math Teachers Field of Major | Percent with Bachelor's Degree in Field |
|---|--|
| Math | 38.5% |
| Math Education | 51.3% |
| Other..... | 10.2% |
| Total | 100.0% |

| Science Teachers Field of Major | Percent with Bachelor's Degree in Field |
|--|--|
| Science | 71.9% |
| Science Education..... | 20.6% |
| Other..... | 7.5% |
| Total | 100.0% |

National Center for Education Statistics

Teacher Credentials

This chart and several that follow contain information relating to the degrees and certificates of Pennsylvania public school mathematics and science teachers.

FULL-TIME CLASSROOM TEACHERS BY SELECTED SUBJECTS 1986-87 through 1990-91

| | 1986-87 | 1987-88 | 1988-89 | 1989-90 | 1990-91 |
|---------------------|---------|---------|---------|---------|---------|
| Mathematics | 6,275 | 6,269 | 6,309 | 6,235 | 6,156 |
| Chemistry | 844 | 865 | 873 | 881 | 886 |
| Physics | 434 | 445 | 491 | 492 | 478 |
| Biology | 1,581 | 1,634 | 1,703 | 1,672 | 1,649 |

Source: PA Department of Education

Full-Time Classroom Teachers in Math and Science

The number of full-time teachers in math has decreased slightly since 1986 while the number of teachers in science has shown an increase.

EMERGENCY TEACHER CERTIFICATES January 1985 through December 1990

| | Physics | Biology | Math | Chemistry |
|------|---------|---------|-------|-----------|
| 1985 | 34 | 282 | 346 | 61 |
| 1986 | 28 | 106 | 169 | 63 |
| 1987 | 30 | 79 | 192 | 56 |
| 1988 | 40 | 74 | 300 | 55 |
| 1989 | 50 | 78 | 354 | 57 |
| 1990 | 48 | 109 | 510 | 54 |
| 1991 | 29 | 70 | 1,226 | 38 |

PA Department of Education

The Pennsylvania Department of Education issues emergency certificates at the request of a local school district when a fully certified teacher is not available and a vacancy exists. This chart indicates the number of emergency certificates issued over the last six years.

TEACHING CERTIFICATES ISSUED IN MATHEMATICS AND SCIENCE 1986-91

The following table shows the number of teachers receiving certificates in math and science over the last five years. At this time, while there are shortages in some locations, overall Pennsylvania is experiencing no shortage of teachers in these disciplines.

CERTIFICATES ISSUED IN MATHEMATICS

| Math | Male | Female | Total |
|------|------|--------|-------|
| 1986 | 154 | 257 | 411 |
| 1987 | 188 | 346 | 534 |
| 1988 | 208 | 305 | 513 |
| 1989 | 212 | 337 | 549 |
| 1990 | 229 | 320 | 549 |
| 1991 | 231 | 298 | 529 |

CERTIFICATES ISSUED IN BIOLOGY

| Biology | Male | Female | Total |
|---------|------|--------|-------|
| 1986 | 104 | 177 | 281 |
| 1987 | N/A | N/A | N/A |
| 1988 | 106 | 207 | 313 |
| 1989 | 95 | 164 | 259 |
| 1990 | 114 | 187 | 301 |
| 1991 | 78 | 139 | 217 |

CERTIFICATES ISSUED IN CHEMISTRY

| Chemistry | Male | Female | Total |
|-----------|------|--------|-------|
| 1986 | 44 | 54 | 98 |
| 1987 | 52 | 70 | 122 |
| 1988 | 42 | 59 | 101 |
| 1989 | 54 | 52 | 106 |
| 1990 | 46 | 51 | 97 |
| 1991 | 48 | 51 | 99 |

CERTIFICATES ISSUED IN EARTH AND SPACE SCIENCE

| Earth and Space Science | Male | Female | Total |
|----------------------------|------|--------|-------|
| 1986 | 33 | 17 | 50 |
| 1987 | 39 | 18 | 57 |
| 1988 | 51 | 21 | 72 |
| 1989 | 33 | 33 | 66 |
| 1990 | 44 | 24 | 68 |
| 1991 | 29 | 22 | 51 |

CERTIFICATE ISSUED IN GENERAL SCIENCE

| General Science | Male | Female | Total |
|-----------------|------|--------|-------|
| 1986 | 83 | 97 | 180 |
| 1987 | 101 | 98 | 199 |
| 1988 | 101 | 81 | 182 |
| 1989 | 99 | 82 | 181 |
| 1990 | 94 | 111 | 205 |
| 1991 | 81 | 89 | 170 |

CERTIFICATES ISSUED IN PHYSICS

| Physics | Male | Female | Total |
|---------|------|--------|-------|
| 1986 | 32 | 3 | 35 |
| 1987 | 29 | 11 | 40 |
| 1988 | 32 | 19 | 51 |
| 1989 | 41 | 11 | 52 |
| 1990 | 52 | 23 | 75 |
| 1991 | 51 | 15 | 66 |

Pennsylvania Department of Education

DEGREES CONFERRED IN MATH AND SCIENCE

| | Engineering 1986-87 | | Doctor's Degrees | | 1989-90 Bachelor's Degrees | | Doctor's Degrees | |
|-------------------------------|--------------------------------|--------------|-----------------------------|--------------|---|--------------|-----------------------------|--------------|
| | Bachelor's Degrees | | | | | | | |
| | Men | Women | Men | Women | Men | Women | Men | Women |
| Non-Resident Alien | 105 | 22 | 100 | 5 | 137 | 14 | 142 | 11 |
| Black, Non-Hispanic | 58 | 27 | | | 71 | 27 | 1 | |
| American Indian | 3 | 1 | | | 1 | 2 | | |
| Asian/Pacific | 141 | 28 | 11 | | 184 | 40 | 16 | 3 |
| Hispanic | 20 | 1 | | | 34 | 6 | 4 | |
| White, Non-Hispanic | 3,553 | 668 | 86 | 8 | 2,996 | 528 | 132 | 18 |
| Totals | 3,880 | 747 | 197 | 13 | 3,423 | 668 | 295 | 32 |

| | Physical Sciences 1986-87 | | Doctor's Degrees | | 1989-90 Bachelor's Degrees | | Doctor's Degrees | |
|-------------------------------|--------------------------------------|--------------|-----------------------------|--------------|---|--------------|-----------------------------|--------------|
| | Bachelor's Degrees | | | | | | | |
| | Men | Women | Men | Women | Men | Women | Men | Women |
| Non-Resident Alien | 16 | 11 | 59 | 4 | 17 | 13 | 49 | 11 |
| Black, Non-Hispanic | 21 | 26 | 2 | | 14 | 23 | 1 | 1 |
| American Indian | | | | | 1 | | | |
| Asian/Pacific | 22 | 23 | 7 | 4 | 26 | 16 | 7 | 2 |
| Hispanic | 7 | 1 | 3 | 1 | 5 | | | |
| White, Non-Hispanic | 880 | 376 | 104 | 27 | 796 | 401 | 96 | 17 |
| Totals | 946 | 437 | 175 | 36 | 859 | 435 | 153 | 31 |

| | Mathematics 1986-87 | | Doctor's Degrees | | 1989-90 Bachelor's Degrees | | Doctor's Degrees | |
|-------------------------------|--------------------------------|--------------|-----------------------------|--------------|---|--------------|-----------------------------|--------------|
| | Bachelor's Degrees | | | | | | | |
| | Men | Women | Men | Women | Men | Women | Men | Women |
| Non-Resident | 8 | 6 | 10 | 4 | 16 | 7 | 14 | 3 |
| Black, Non-Hispanic | 14 | 12 | | | 13 | 18 | | |
| American Indian | | | | | 1 | | | |
| Asian/Pacific | 18 | 19 | 1 | 1 | 16 | 10 | 2 | 1 |
| Hispanic | 3 | 7 | 1 | | 4 | 2 | | |
| White, Non-Hispanic | 604 | 529 | 11 | 3 | 534 | 435 | 18 | 5 |
| Totals | 647 | 573 | 23 | 8 | 584 | 472 | 34 | 9 |

Pennsylvania Department of Education

Degrees Conferred

This table lists the number of bachelor's and doctoral degrees conferred by Pennsylvania higher education institutions in 1986-87 and 1989-90 in the areas of engineering, physical sciences, and mathematics.

Summary and Conclusions

Goal 4 — Mathematics and Science

Some quantitative measures of progress in math and science were included in Goal 3 (e.g. TELLS and SAT). Additional measures are included here, such as results of the National Assessment of Educational Progress (NAEP) 8th grade state trials, and Pennsylvania Advanced Placement scores for courses in math and the sciences. Also, data are included on percentages of students enrolled in math and science coursework, degrees granted in math, science, and engineering, and credentials of teachers of math and science.

With regard to NAEP, while Pennsylvania students performed slightly better than students nationally, the average performance of U.S. students overall was considered to be inadequate by most observers. Regarding Advanced Placement scores, Pennsylvania students appear to hold their own when compared to their peers nationally, with some scores above and others below the national average.

The several charts describing estimated percentages of students enrolled in science and math courses again show that Pennsylvania students are more likely to be enrolled in such coursework than are their peers nationally. However, more students need to be involved in advanced coursework beyond Biology and Algebra 1. Also, the charts indicate that Pennsylvania elementary students receive, on the average, fewer instructional hours dedicated to math and science than do their counterparts nationally. While the quantity of instruction is a factor, the quality of instruction is likely a far more compelling issue. However, devoting more high quality instructional time to math and the sciences is an issue worthy of consideration. Data are also included on the percentage of minority math and science teachers. While Pennsylvania has a lower percentage of minority students than the national average, the percentage of minority teachers is lower still. This suggests the need to increase further our efforts to recruit talented minority teachers for all subjects, particularly math and science.

Charts describing degrees granted by Pennsylvania higher education institutions in science, math and engineering between 1986-87 and 1989-90 reveal several interesting bits of information, such as significant declines in bachelor's degrees in each category; stagnation or decline, with the exception of modest growth in engineering doctorates and bachelor's degrees in the physical sciences, in the numbers of women receiving degrees in these areas; and the high proportion of non-resident aliens receiving doctorates in each of the three fields.

The section concludes with several charts describing information regarding certification of existing and new teachers in the fields of math and the sciences, and information on the types of preparation Pennsylvania teachers of math and science received. Several features are worthy of note. First, while there is some fluctuation (as much as 20% can be noted in certificates issued over time), overall there appears to be little discernible trend in the numbers of certificates issued. Next, it is interesting to note that more than 70% of science teachers bachelor's degrees were in a major science field, as opposed to only 20% in science education. The data for math teachers are substantially different, with more math education degrees (51%) than regular math degrees (38%). Finally, although it is too early to know the full significance if any, there is a very large growth in the issuance of emergency certificates for mathematics to date in 1991. This growth appears to indicate that districts are having a harder time this year hiring fully certified math teachers. Time will tell if this is a trend or merely an aberration.

While we must continue in a variety of ways to improve the quality and quantity of mathematics and science instruction, and to ensure that more of our students are better prepared in these subjects, a less quantifiable issue is of similar importance. We must increase our expectations that our students take coursework and do well in these subjects. We cannot accept that substantial proportions of our students lose interest in math and science in the early middle grades and forever lose the opportunity to pursue advanced studies and/or careers in these subjects. Otherwise, mustering the best teachers and the best coursework will still result in far too few students achieving at high levels in math and science.

Current Efforts to Meet Goal 4

- **Governor's School for the Sciences** — Housed at Carnegie-Mellon University, the Governor's School for the Sciences provides advanced work in the sciences during the summer for highly talented Pennsylvania high school youth.
- **Higher Education Partnership** — Funded through federal sources, the Pennsylvania Department of Education directs support to partnerships between higher education institutions and local school districts or consortia designed to improve the quality of math and/or science instruction.
- **PHEAA Loan Forgiveness for Math and Science Teachers** — Since 1983 the Pennsylvania Higher Education Assistance Agency (PHEAA) has operated a program of loan forgiveness for teachers with Pennsylvania teaching certificates in math or the sciences who work in Pennsylvania public or private schools. Twenty-five percent of loans may be forgiven annually (up to a maximum of \$2500) for full time teaching service.
- **Educational Opportunity Professional Education Program (EOPEP)** — To promote an increase in the number of African American students pursuing post-baccalaureate degrees, the Commonwealth operates EOPEP, a scholarship program for black graduates of Pennsylvania public institutions who wish to pursue graduate and professional degrees.
- **Tuition Support** — The Pennsylvania Science Teacher Education Program, administered by the Pennsylvania Higher Education Assistance Agency (PHEAA), provides \$1 million annually to remit tuitions for elementary and secondary science teachers to upgrade their skills.
- **PSInet** — This electronic forum links Pennsylvania mathematics and science teachers for the purpose of exchanging information and sharing curriculum. It also provides schools with statewide rights to mathematics and science instructional television programs.
- **Summer Intensive Science and Mathematics Project** — This program targets Latino students in major urban areas for intensive mathematics and science instruction and projects during the summer months.

Future Directions to Meet Goal 4

- **Pennsylvania Assessment System** — Restructure state-level mathematics assessment to measure higher order skills in grades 5, 8 and 11.
- **NAEP State Trial Assessments** — Pennsylvania will continue to participate in the NAEP State assessments which will cover mathematics in 1992 and science in 1994.
- **Elementary School Instruction** — Enhance science, mathematics, and technology instruction in elementary grades through improved pre-service and in-service training.
- **Advanced Placement Coursework** — Encourage the offering of Advanced Placement coursework, particularly in mathematics and the sciences.
- **Data Collection** — Improve data collection on math and science achievement to measure progress toward the National Goals.

GOAL 5:

ADULT LITERACY AND LIFELONG LEARNING

“By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.”

Objectives:

- “Every major American business will be involved in strengthening the connection between education and work.”
- “All workers will have the opportunity to acquire the knowledge and skills, from basic to highly technical, needed to adapt to emerging new technologies, work methods, and markets through public and private educational, vocational, technical, workplace, or other programs.”
- “The number of quality programs, including those at libraries, that are designed to serve more effectively the needs of the growing number of part-time and mid-career students will increase substantially.”
- “The proportion of those qualified students, especially minorities, who enter college; who complete at least two years; and who complete their degree programs will increase substantially.”
- “The proportion of college graduates who demonstrate an advanced ability to think critically, communicate effectively, and solve problems will increase substantially.”

Outcomes and Measures Relating to Goal 5 — Adult Literacy and Lifelong Learning

This section includes data bearing on Goal 5 and its related objectives. Measures detailed include information such as:

- post-high school activity of graduates
- numbers of recipients of loans and grants for higher education
- retention rates of freshmen at state-supported higher education institutions
- enrollments in vocational and adult education programs
- enrollments in programs funded through the Job Training Partnership Act and New Directions for Employment

Post High-School Activity of High School Graduates (1989-90)

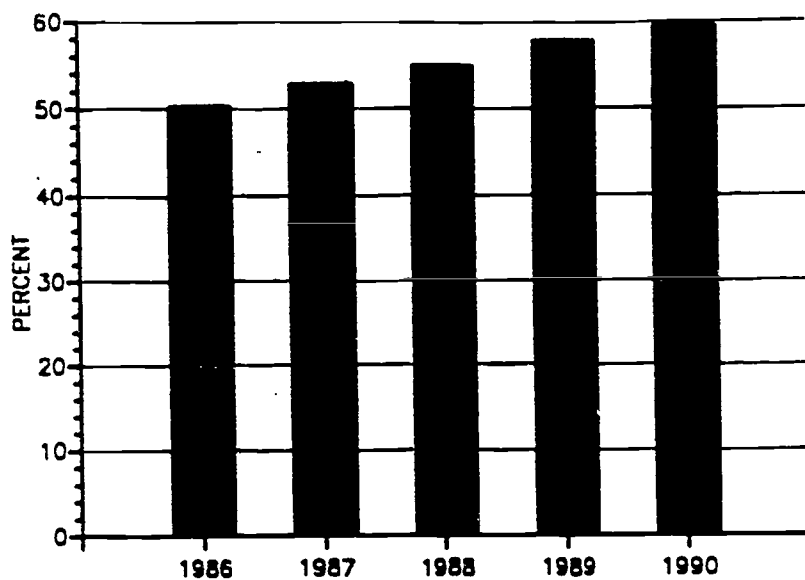
| State Total | Amer Ind/ Alaskan Ntve | | Asian/ Pac Islander | | Black Not Hspnc Orign | | Hispanic | | White Not Hspnc Orign | | Total | |
|--------------------------------------|---------------------------|-----------|------------------------|------------|--------------------------|--------------|------------|------------|--------------------------|---------------|---------------|---------------|
| | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| Community College | 2 | 5 | 103 | 76 | 451 | 660 | 64 | 106 | 4,297 | 5,003 | 4,917 | 5,850 |
| Private 2-yr College | | 2 | 5 | 8 | 62 | | 3 | 11 | 620 | 861 | 690 | 978 |
| Public 4-yr coll/univ | 7 | 5 | 300 | 248 | 759 | 1,053 | 92 | 105 | 11,295 | 12,038 | 12,453 | 13,449 |
| Private 4-yr coll/univ | 3 | 6 | 189 | 194 | 304 | 427 | 46 | 55 | 4,646 | 5,412 | 5,188 | 6,094 |
| Other post-2nd Ast/ASB | | 1 | 16 | 17 | 148 | 207 | 23 | 29 | 1,946 | 2,300 | 2,133 | 2,642 |
| Other post-2nd noneg | | 4 | 7 | 7 | 115 | 181 | 14 | 26 | 1,481 | 2,515 | 1,617 | 2,733 |
| *2-yr college | 1 | | 6 | 6 | 45 | 17 | 5 | 4 | 443 | 536 | 500 | 563 |
| *4-yr coll/univ | 3 | 3 | 156 | 141 | 434 | 604 | 54 | 47 | 4,553 | 4,393 | 5,200 | 5,188 |
| Other postsecondary | | | 15 | 8 | 174 | 134 | 13 | 25 | 332 | 378 | 534 | 545 |
| Farm workers | | | | | 8 | 11 | | 1 | 426 | 55 | 434 | 67 |
| Homemakers | | | 1 | 6 | 1 | 150 | | 23 | 9 | 1,024 | 11 | 1,211 |
| Militarys | 3 | 1 | 20 | 3 | 655 | 203 | 82 | 19 | 4,427 | 675 | 5,187 | 901 |
| White Collar workers | 2 | 1 | 20 | 22 | 296 | 463 | 30 | 57 | 1,169 | 2,756 | 1,517 | 3,299 |
| Blue collar workers | 7 | | 16 | 5 | 306 | 117 | 66 | 44 | 6,630 | 1,516 | 7,025 | 1,682 |
| Service workers | 2 | 2 | 13 | 19 | 176 | 254 | 25 | 50 | 2,296 | 3,601 | 2,512 | 3,926 |
| Unemployed | | 1 | 11 | 8 | 212 | 185 | 42 | 50 | 2,104 | 1,882 | 2,369 | 2,126 |
| Unknown | 9 | 5 | 35 | 37 | 404 | 347 | 84 | 73 | 3,116 | 2,856 | 3,668 | 3,318 |
| Total Graduates | 39 | 36 | 913 | 805 | 4,550 | 5,117 | 643 | 725 | 49,810 | 47,889 | 55,955 | 54,572 |
| Pennsylvania Department of Education | | | | | | | | | | | | |

Post High School Activity of 1990 High School Graduates

This table indicates the activities of 1990 high school graduates, including postsecondary education and/or training and employment by race/ethnicity and gender.

*out of state colleges and universities

PUBLIC HIGH SCHOOL GRADUATE COLLEGE-BOUND RATE
1986 THROUGH 1990

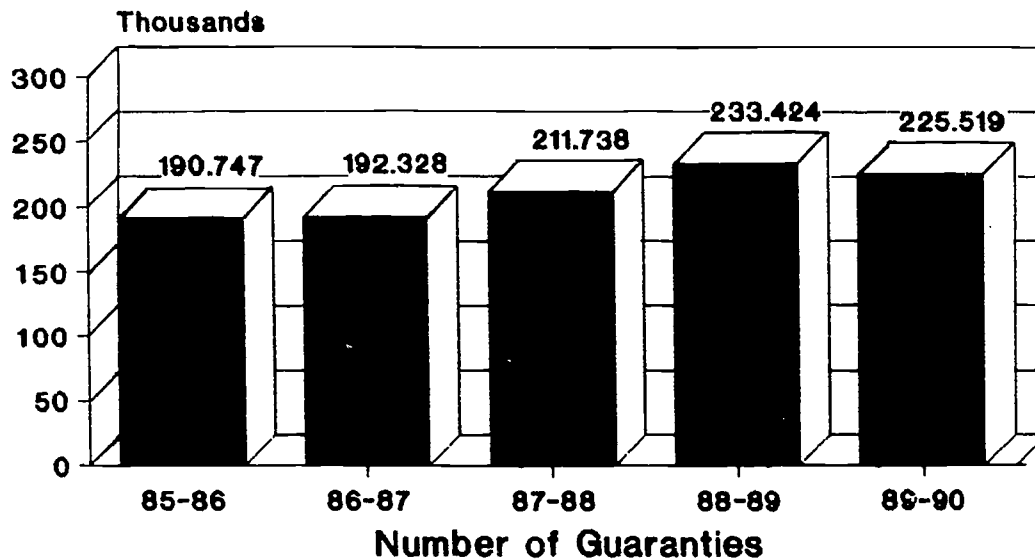


Postsecondary Participation Rates

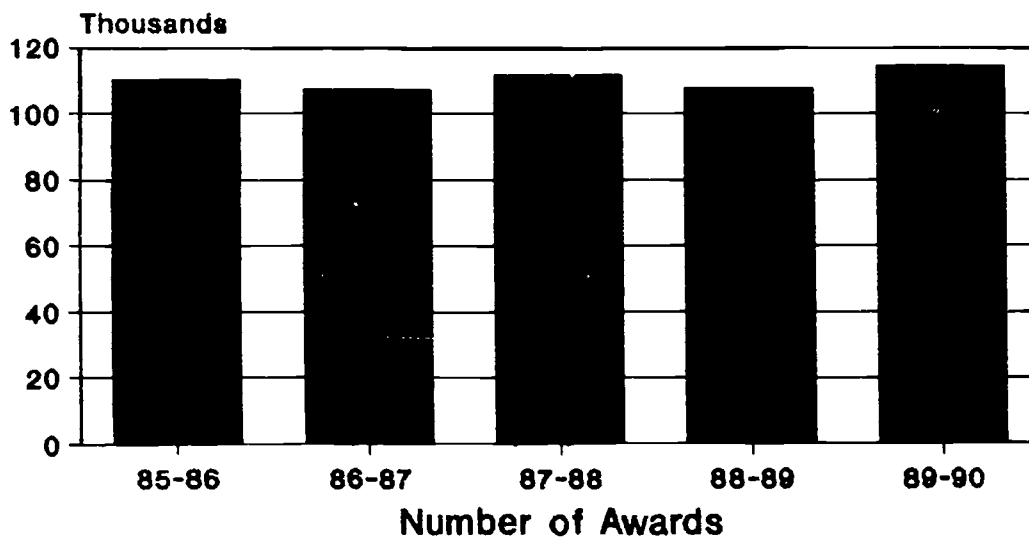
In increasing proportions, high school seniors report their intention to pursue college or other postsecondary education. This chart shows the steady growth in student postsecondary participation since 1986.

PA Department of Education

Pennsylvania Higher Education Student Loan Program



Pennsylvania Higher Education Grant Program



PA Higher Education Assistance Agency

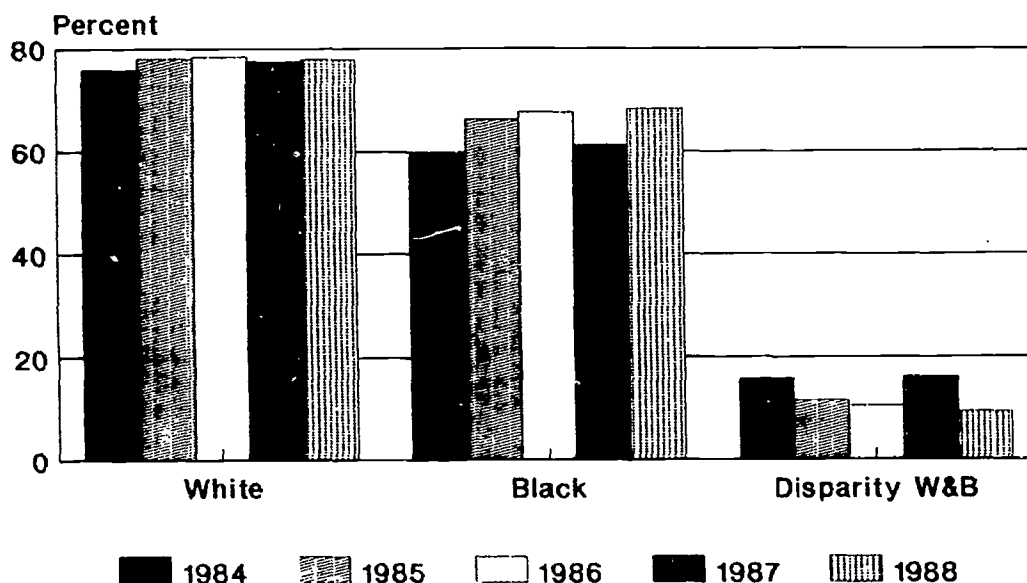
PA Higher Education -- Loan and Grant Programs

Perhaps the greatest barrier to postsecondary education today is its cost. These graphs indicate the growth in the number of Pennsylvania students receiving loans and grants from state and federal sources from 1985-86 to 1989-90.

Retention Rates

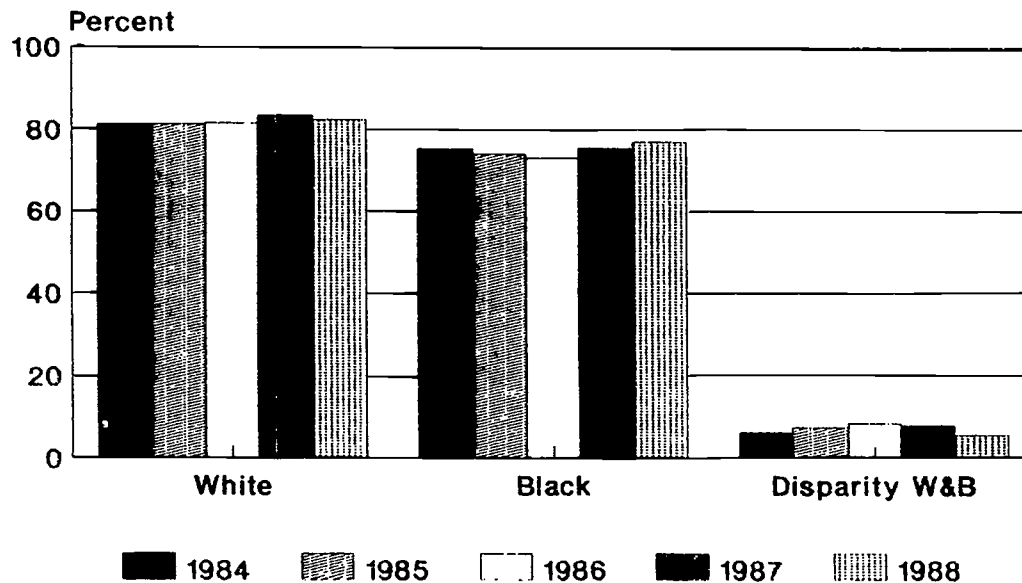
As important as it is for students to decide to attend higher education institutions, it is equally important that they stay enrolled. These graphs depict the percentages of students, white and black, in community colleges, the State System of Higher Education, and the State-Related Universities, who remain enrolled after their freshman year.

One-Year Retention Rates of Freshmen at Pennsylvania's Colleges State System of Higher Education



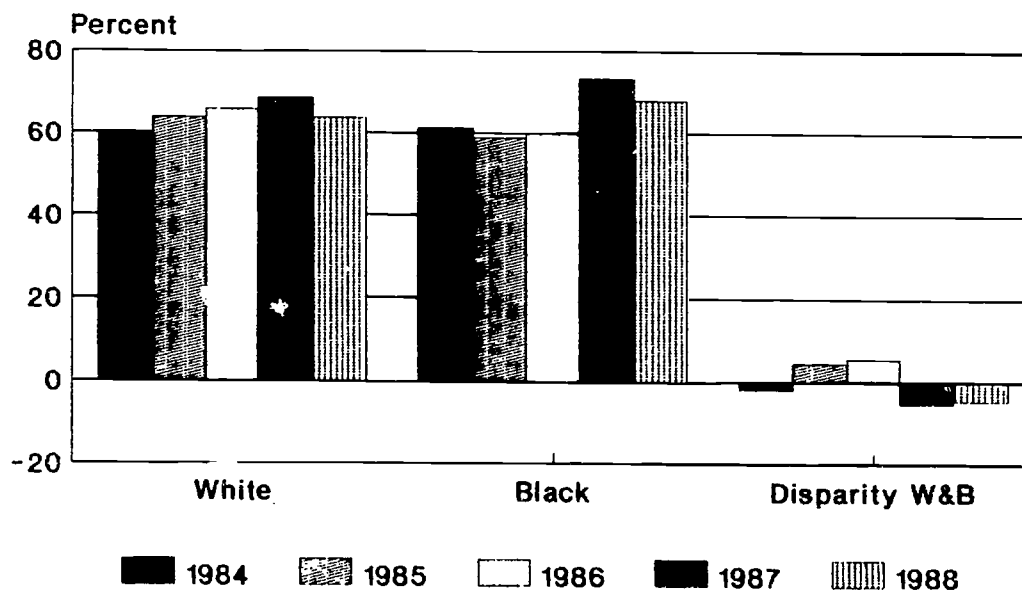
PA Department of Education

One-Year Retention Rates of Freshmen at Pennsylvania's Colleges State-Related Universities



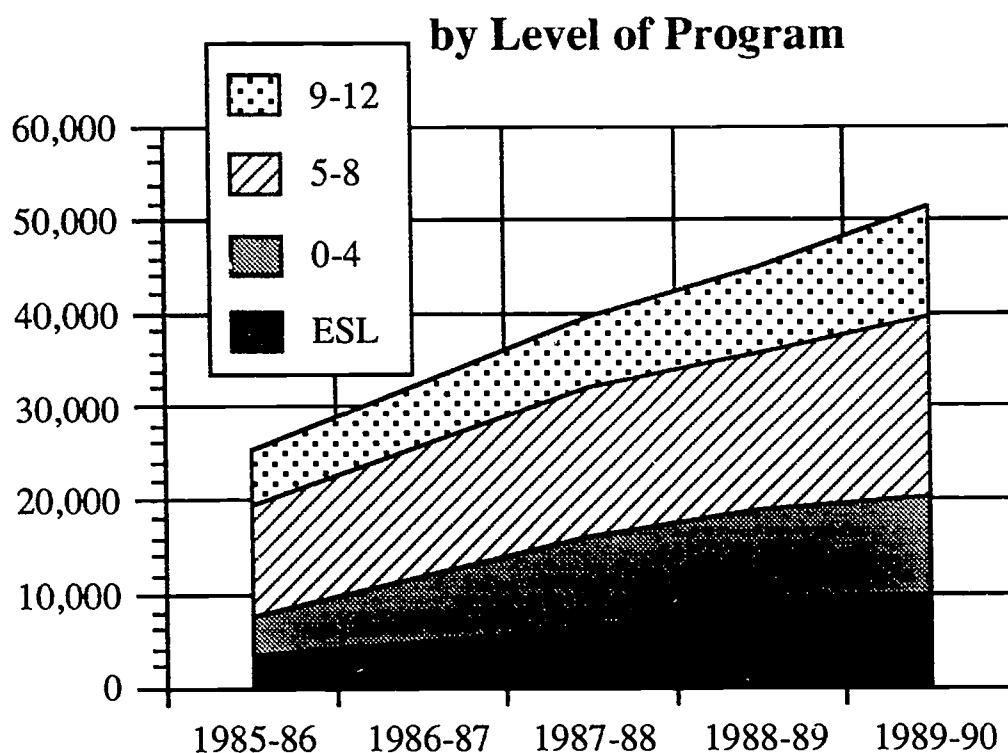
PA Department of Education

One-Year Retention Rates of Freshmen at Pennsylvania's Colleges Community Colleges



PA Department of Education

Students in Adult Education Programs: 1985 to 1990



Services By Program Enrollment and Type of Service

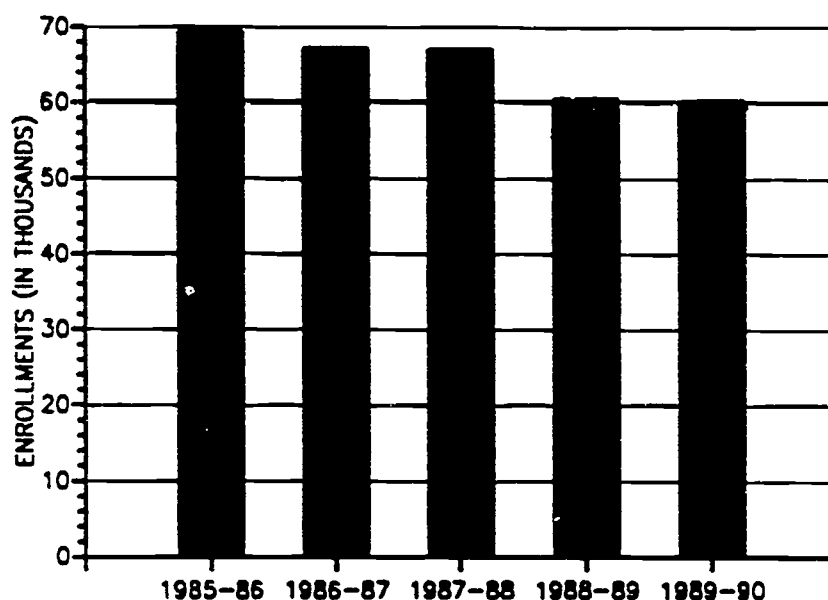
| Enrollment Level | 1985-86 | | 1986-87 | | 1987-88 | | 1988-89 | | 1989-90 | |
|------------------|---------|------|---------|------|---------|------|---------|------|---------|------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| ESL | 3,201 | 12.4 | 6,152 | 16.7 | 5,973 | 15.1 | 9,196 | 20.4 | 9,984 | 19.0 |
| 0-4 | 4,310 | 16.9 | 7,333 | 19.9 | 10,165 | 25.7 | 9,726 | 21.6 | 10,471 | 20.0 |
| 5-8 | 11,828 | 46.3 | 15,974 | 43.5 | 15,843 | 40.1 | 16,808 | 37.3 | 19,002 | 36.0 |
| 9-12 | 6,187 | 24.3 | 7,293 | 19.8 | 7,545 | 19.1 | 9,342 | 20.7 | 12,124 | 23.0 |

Adult Basic Education – by level

This chart identifies the level of study of students enrolled in Pennsylvania adult education programs, including English as a Second Language (ESL), adult basic education focusing on grades 0-4 and 5-8, and General Educational Development (GED) programs.

PA Department of Education

VOCATIONAL EDUCATION ADULT PROGRAM ENROLLMENTS
1985-86 THROUGH 1989-90



Pennsylvania Area Vocational Technical Schools (AVTS) serve not only high school students, but also provide training for thousands of adults as well. However, as this graph indicates, the adult enrollments in AVTSs have declined steadily over the last several years.

PA Department of Education

Job Training Partnership Act 1990
Title IIA
Adult and Youth Programs

| | Number of Participants | Percent of Participants |
|---------------------------------|---------------------------|----------------------------|
| Skill/Classroom | 6,861 | 28% |
| Basic/Classroom | 5,084 | 21% |
| On the Job Training | 4,603 | 19% |
| Work Experience | 608 | 2% |
| Education for Employment | 154 | 1% |
| Pre-Employment Skills | 2,929 | 12% |
| Entry Employment | 16 | — |
| Tryout Employment | 455 | 2% |
| School to Work Transition | 277 | 1% |
| Job Search | 2,576 | 10% |
| Limited Work Experience | 1,018 | 4% |
| Remediation | 54 | — |
| Other | 732 | 3% |
| TOTALS | 25,367 | 103%* |

Pennsylvania Department of Labor and Industry

Job Training Partnership Act

The Job Training Partnership Act provides significant federal support to train and educate economically disadvantaged youth and adults. While federal JTPA funds available to Pennsylvania have declined markedly in recent years, the program continues to provide important second chance training for thousands of Pennsylvanian. This table indicates the percentage of JTPA participants, both dislocated workers and regular clients, involved in particular types of training.

Title III
Dislocated Worker

| | Number of Participants | Percent of Participants |
|---------------------------------|---------------------------|----------------------------|
| Basic Education/Classroom | 818 | 11% |
| Skill/Classroom | 3,021 | 41% |
| On the Job Training | 1,572 | 21% |
| Job Search | 2,223 | 30% |
| Remediation | 71 | 1% |
| Other | 239 | 3% |
| TOTAL | 7,994 | 10%* |

Note: Because a participant may be in more than one activity, the percentages will be above 100.

Pennsylvania Department of Labor and Industry

New Directions for Employment

Another major employment and training effort is New Directions for Employment, designed to provide a range of training and education services for welfare recipients with substantial barriers to employment. These charts indicate the three-year growth in numbers of clients who received education and training, and who were placed in jobs.

New Directions for Employment

Job Placements

| | 1988-89 | 1989-90 | July - June 1990-91 |
|------------------------|----------------|----------------|--------------------------------------|
| Total Placements . . . | 46,936 | 50,301 | 54,821 |

Educational Enrollments

| | 1988-89 | 1989-90 | 1990-91 |
|-------------------------|----------------|----------------|----------------|
| Total Enrollments . . . | 6,122 | 11,092 | 15,166 |

Training Enrollments

| | 1988-89 | 1989-90 | 1990-91 |
|-------------------------|----------------|----------------|----------------|
| Total Enrollments . . . | 19,142 | 27,321 | 32,577 |

Pennsylvania Department of Public Welfare

Summary and Conclusions

Goal 5 — Adult Literacy and Lifelong Learning

With the possible exception of Goal 1, Goal 5 presents perhaps the greatest challenge to measurement. For example, what does it mean to be “literate?” What knowledge and skills will truly be necessary to “compete in a global marketplace?” To determine where we are in relation to Goal 5, this section includes post-high school activity of Pennsylvania high school graduates, and trends and characteristics of other adult education and training programs.

For the first time in our history, in 1990 more than 60% of public high school graduates went on to some form of postsecondary degree-granting institution. This is likely due in part to increasing state support in the form of grants and loans to students. Freshman retention rates at state-supported 4-year institutions are roughly 75%, although there is some disparity between whites and blacks (the only ethnic groups for which data are available). For Pennsylvanians who lack basic literacy skills, the Commonwealth’s state and federally-supported programs have shown steady growth since 1986. Other alternative education and training programs, such as the Job Training Partnership Act (JTPA), New Directions for Employment, and adult enrollments in Area Vocational Technical Schools, are also available. However, marked declines in AVTS adult enrollments have been noted over time, and, due to sharp decreases in federal support, JTPA programs have been dramatically curtailed over the last several years.

Goal 5 is an area ripe for business-education collaboration. Businesses in Pennsylvania have initiated and participated in collaborative efforts to strengthen education and job training in many local communities. As good as these efforts are, and some are very good, more attention in more communities should be paid to developing broad-based partnerships to improve education and training for all of our citizens.

Further, the various types of programs for adult education and training can be more effectively integrated. A good deal has been accomplished already, particularly the nexus between JTPA and welfare reform through the Joint Jobs Initiative. Still, much more can be done to integrate adult literacy and job training programs and to articulate academic and occupational offerings between high school and postsecondary institutions, to identify only two examples. Such refinements will result not only in more efficient programs and services, but in increased numbers of adults served effectively through state, local, and federal dollars.

Current Efforts to Meet Goal 5

- **Statewide Business-Education Partnership** — The Governor has announced the establishment of a statewide coalition of leaders from business, education and government which will stimulate the development and expansion of local partnership efforts, and also encourage and assist education reform efforts at the state and local levels.
- **State Literacy Programs** — The Commonwealth provides state dollars to enhance basic reading and computation skills, resulting in service to low-literate Pennsylvanians, and the training of volunteer tutors.
- **Job Training Partnership Act Literacy** — The Pennsylvania Department of Education directs that the least 40% of JTPA State Education Grant funds be spent by Service Delivery Areas on adult literacy and basic education.
- **Committee on Workforce Development** — Working under the aegis of the Governor’s Economic Development Partnership Board, the Committee on Workforce Development developed recommendations to improve the link between education and work, and to assist communities plan in a coordinated and systematic way for the delivery of education and job training services.

- **Work-Based Learning Project** — Pennsylvania was among a handful of sites chosen by the U.S. Department of Labor to receive grant funds designed to identify appropriate aspects of the West European apprenticeship and ascertain their relevance for occupational training in the Commonwealth.
- **Customized Job Training (CJT)** — CJT provides funding to support training for new, retained or upgraded jobs.
- **Ben Franklin Partnership** — The Partnership serves as a link between university research activity and the Commonwealth's high-technology business community. The university-business connection has grown enormously in recent years, and remains one of Pennsylvania's greatest strengths.
- **Joint Jobs Initiative** — Joint Jobs provides education, training, and service to out-of-school youth and adults with barriers to employment and the transitionally needy. The program offers a single point of contact to assist welfare recipients gain skills necessary to break the cycle of welfare dependency.
- **Various Efforts to Strengthen Access and Excellence in Higher Education.**
 - **Higher Education Grant Assistance** — During 1989-90, 115,300 students received grants; 45,300 students were employed through federal and state work study programs; and more than 300,000 students received student loans.
 - **Institutional Assistance Grants (IAG)** — Institutional Assistance Grants help 90 private institutions.
 - **Student Support Services** — To enhance postsecondary retention and completion rates of Pennsylvania students who come from economically and educationally disadvantaged backgrounds, the Commonwealth funds counseling and tutorial programs at nearly 80 campuses across the state through the Act 101 Program.
 - **Minority Recruitment and Retention** — A major new effort is underway at the State System Universities to increase the recruitment and retention of minority students.
- **Library WORKPLACE Program** — Over one million dollars in private, state, and federal dollars has been used to develop the Library WORKPLACE Program. Public and prison libraries provide information on careers: educational requirements, pay scales, job availability, how to write a resume and prepare for a job interview. The information is geared for adults in transition, those entering the workforce or changing careers.
- **Single Parent and Homemaker Programs** — Pennsylvania's Single Parent and Homemaker services establish and sustain vocational education and training programs which enable low income single parents and homemakers to achieve economic independence. Initiated in 1980, programs and clients have grown significantly. In program year 1989-90, Pennsylvania supported 55 programs serving more than 5000 clients through the use of approximately \$3.2 million in state and federal funds. As a result of these efforts, 44% of clients entered or continued job training; 17% obtained full-time employment; 20% were engaged in training while on the job; and 14% were working part-time.

Future Directions to Meet Goal 5

- **National Literacy Survey** — Participate in the 1992 National Adult Literacy Survey, which will provide, for the first time, specific information on the functional literacy level of Pennsylvanians.
- **Greater Coordination of Literacy Efforts** — Coordinate and integrate literacy with job training programs through closer linkages among the Departments of Education, Labor and Industry, and Public Welfare. A major focus will be placed on providing welfare recipients with both literacy and job training skills so that they can move off the welfare rolls and remain self-sufficient.
- **Expand Postsecondary Training** — Continue to encourage the establishment of postsecondary education training programs, particularly community colleges and technical institutes, in areas of the Commonwealth which presently have little or no access to them.

- **Secondary-Postsecondary Vocational Linkages** — Establish programs which will enable students to pursue a 4 or 6-year sequence of coursework (11th-14th or 11th-16th year) involving academic and occupational material which will be offered in schools and in private industry.
- **Increased Postsecondary Participation by Disadvantaged Students** — By working with JTPA Service Delivery Areas, public schools and higher education institutions, the Commonwealth will craft a widespread program providing disadvantaged youth with a four-year program of academic remediation, employment counseling and financial assistance designed to prepare and assist them in paying for college.
- **Improved Data Collection** — Strengthen data collection on the array of postsecondary education and training programs administered at the state level.

GOAL 6:

SAFE, DISCIPLINED, AND DRUG-FREE SCHOOL

“By the year 2000, every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning.”

Objectives:

- “Every school will implement a firm and fair policy on use, possession, and distribution of drugs and alcohol.”
- “Parents, businesses, and community organizations will work together to ensure that schools are a safe haven for all children.”
- “Every school district will develop a comprehensive K-12 drug and alcohol prevention education program. Drug and alcohol curriculum should be taught as an integral part of health education. In addition, community based teams should be organized to provide students and teachers with needed support.”

Outcomes and Measures Relating to Goal 6 — Safe, Disciplines, and Drug-Free Schools

This section includes data bearing on Goal 6 and its related objectives. Measures detailed include information such as:

- student surveys on drug abuse and abuse.
- teacher surveys on drug use, school climate, student violence and other related topics.

Student Use of Tobacco, Alcohol, Marijuana, and Cocaine

The following charts depict 1991 information about risk behaviors related to use of several drugs. Data were gathered for program planning purposes from a random sample of 2,200 Pennsylvania students in grades 9-12. The survey, conducted as a function of the Department of Education's Cooperative Agreement with the Centers for Disease Control, is part of a national survey system to monitor trends in risk behaviors among high school students. Due to the low response rate (52% of school districts and 86% of students) the information is specific to only those students who participated and cannot be generalized to all Pennsylvania high school students.

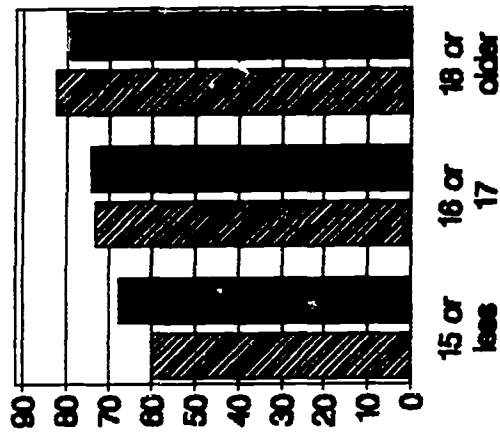
PENNSYLVANIA DEPARTMENT OF EDUCATION

PLEASE NOTE: THERE IS A WIDE RANGE OF DIFFERENCE IN THE RESPONSES TO THE SURVEY AND THOSE CONTAINED IN THE NEXT SURVEY CONDUCTED BY THE GOVERNOR'S DRUG POLICY COUNCIL. THESE DIFFERENCES ARE PROBABLY ASSOCIATED WITH AGE LEVELS IN THE SAMPLES.

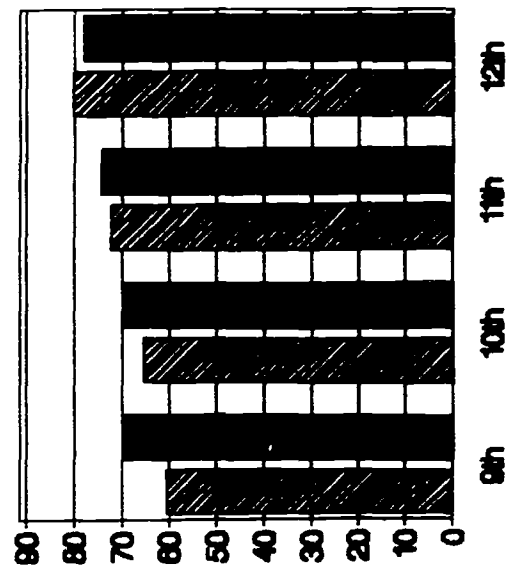
Percentage of respondents who ever tried cigarette smoking, even one or two puffs.



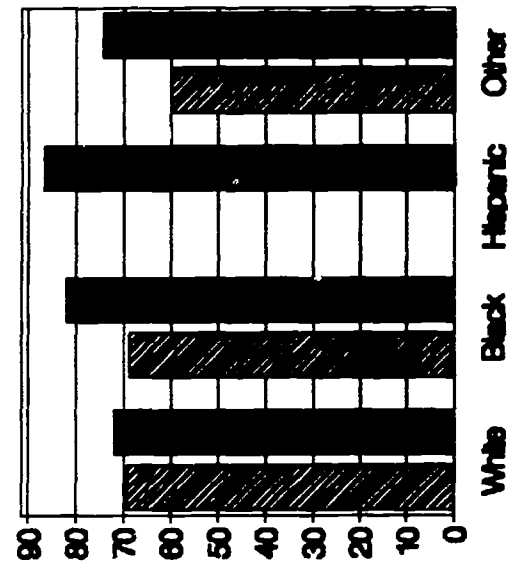
By Age



By Grade



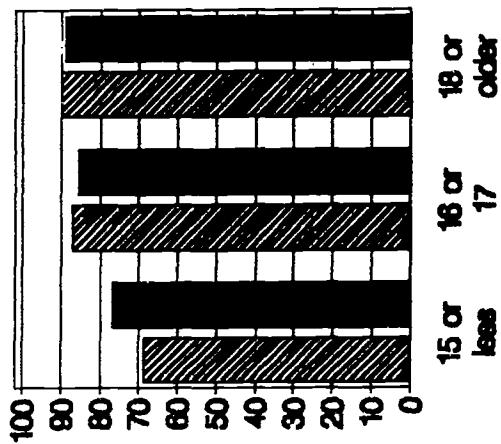
By Race/Ethnicity



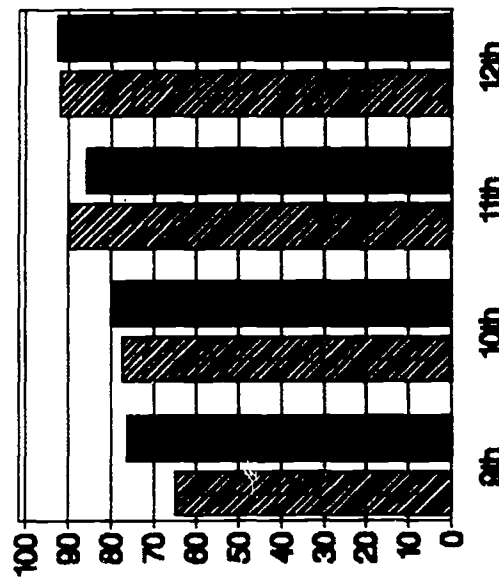
Percentage of respondents who had at least one drink of alcohol on one or more days during their life.



By Age

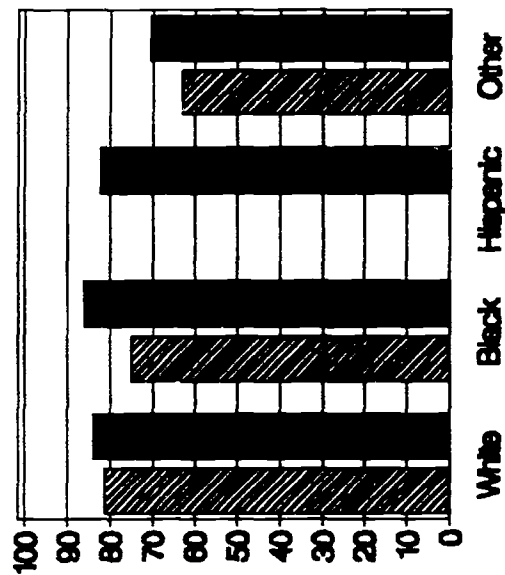


By Grade



PA Department of Education

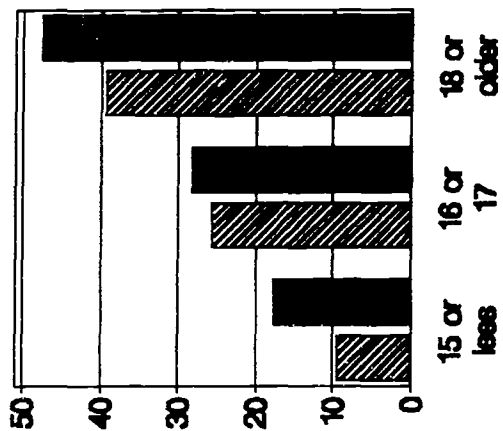
By Race/Ethnicity



Percentage of respondents who used marijuana one or more times during their life.



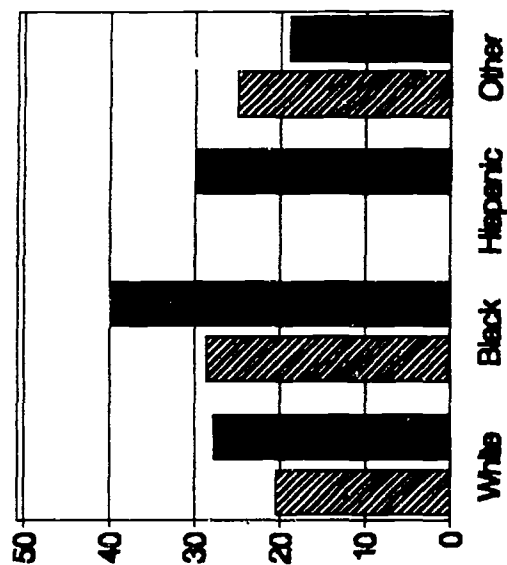
By Age



By Grade



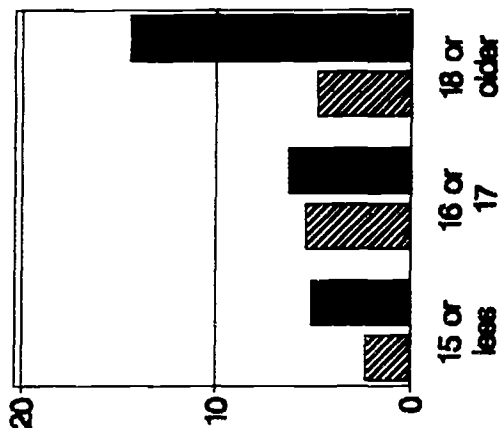
By Race/Ethnicity



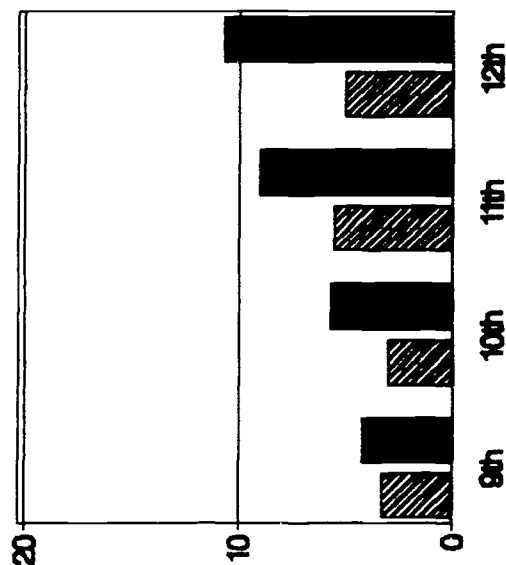
Percentage of respondents who used any form of cocaine, including powder, crack, or freebase one or more times during their life.



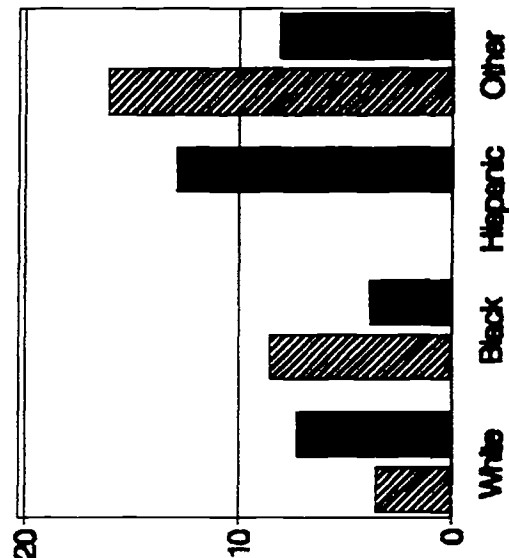
By Age



By Grade



By Race/Ethnicity



Governor's Drug Policy Council Student Survey

During the 1990-91 school year, the Governor's Drug Policy Council conducted a survey of more than 47,000 Pennsylvania students in 6th, 7th, 9th, and 12th grades regarding their use of alcohol and other drugs. Eighty-five percent of students attended public school, and 15% attended private schools. Boys constituted 51% of the responders and girls 49%. The following information briefly summarizes the survey findings.

Alcohol

- 47% of seniors drink alcohol at least once per month;
- 23% of seniors drink alcohol at least once per week;
- 11% of 6th and 7th graders drink alcohol at least once per week;
- 80% of seniors and 70% of 9th graders are willing to drink alcohol; 50% of 7th graders and 40% of 6th graders are interested in drinking alcohol.

Tobacco

- 22% of seniors, 13% of 9th graders, 5% of 7th graders, and 2% of 6th graders smoke cigarettes daily;
- 34% of seniors and 9th graders, 24% of 7th graders, and 15% of 6th graders indicate willingness to smoke cigarettes. Marijuana
- 11% of seniors report smoking marijuana at least monthly;
- 6% of seniors smoke marijuana at least once a week;
- 22% of seniors, 12% of 9th graders, and 3% of 6th and 7th graders express their intent to smoke marijuana. Other Drugs
- 3.5% of seniors and 9th graders, 1.5% of 7th graders, and .5% of 6th graders report using stimulants at least once per month;
- 1% of seniors and an average of 1.5% of 9th, 7th, and 6th graders report that they abuse over-the-counter cold medicine at least monthly;
- 2% or less of seniors, and 1% or less of 9th, 7th, and 6th graders report monthly use of hallucinogens, depressants, cocaine, steroids, crack, or heroin.

When compared to surveys administered in 1989 on a similar set of issues, significant improvements can be noted. For example, statistically significant reductions in students getting drunk and/or high were noted; significantly lower rates of alcohol, crack, inhalant and steroid consumption were reported among Pennsylvania students when compared to national norms; dramatic declines in the use of marijuana and cocaine, particularly among 9th and 12th graders, were noted; and marked reductions in high risk behaviors such as drinking and driving, and riding in a vehicle with a driver who has been drinking or smoking marijuana were reported.

PUBLIC SCHOOL TEACHERS SURVEY

1987-88

The summaries below are based on a sample survey which included 1,844 teachers from Pennsylvania (K-12); however, these estimates relate only to those teachers in grades 9-12.

The question asked was: "Do you agree to disagree with each of the following statements?"

1. The level of student misbehavior (e.g., noise, horseplay or fighting in the halls, cafeteria or student lounge) in this school interferes with my teaching.

| | Estimated Percent |
|-----------------------------|--------------------------|
| Strongly Agree | 13.4 |
| Somewhat Agree | 29.9 |
| Somewhat Disagree | 27.3 |
| Strongly Disagree | 29.4 |

2. My principal enforces school rules for student conduct and backs me up when I need it.

| | Estimated Percent |
|-----------------------------|--------------------------|
| Strongly Agree | 39.1 |
| Somewhat Agree | 41.7 |
| Somewhat Disagree | 12.7 |
| Strongly Disagree | 6.5 |

3. Rules for student behavior are consistently enforced by teachers in this school, even for students who are not in their classes.

| | Estimated Percent |
|-----------------------------|--------------------------|
| Strongly Agree | 11.4 |
| Somewhat Agree | 37.6 |
| Somewhat Disagree | 29.8 |
| Strongly Disagree | 21.1 |

4. The amount of student tardiness and class cutting in this school interferes with my teaching.

| | Estimated Percent |
|-----------------------------|--------------------------|
| Strongly Agree | 20.0 |
| Somewhat Agree | 28.8 |
| Somewhat Disagree | 26.4 |
| Strongly Disagree | 24.8 |

The question asked was: "Indicate the degree to which each of the following matters is a problem in this school. Do you think it is a serious problem a moderate problem, a minor problem, or not a problem at all."

1. Robbery or theft

| | Estimated Percent |
|---------------------|-------------------|
| Serious | 4.0 |
| Moderate | 16.5 |
| Minor | 52.8 |
| Not a problem | 26.7 |

2. Vandalism of school property

| | Estimated Percent |
|---------------------|-------------------|
| Serious | 7.6 |
| Moderate | 25.5 |
| Minor | 50.7 |
| Not a problem | 16.3 |

3. Physical abuse of teachers

| | Estimated Percent |
|---------------------|-------------------|
| Serious | 0.7 |
| Moderate | 4.3 |
| Minor | 23.6 |
| Not a problem | 71.4 |

4. Verbal abuse of teachers

| | Estimated Percent |
|---------------------|-------------------|
| Serious | 13.0 |
| Moderate | 23.5 |
| Minor | 44.3 |
| Not a problem | 19.3 |

The question asked was: "At this school, how much control do you feel you have IN YOUR CLASSROOM over each of the following areas of your planning and teaching?"

| | Estimated Percent |
|-------------------------|-------------------|
| No Control1) | 11.3 |
|2) | 22.3 |
|3) | 21.9 |
|4) | 24.7 |
|5) | 15.9 |
| Complete Control.....6) | 3.9 |

Source: National Center for Education Statistics

THE CONDITION OF TEACHING STATE-BY-STATE 1990

In 1990, the Carnegie Foundation for the Advancement of Teaching issued a report entitled, "The Condition of Teaching." The report contained the results of teacher surveys on a variety of topics. The following information describes the responses of teachers in Pennsylvania and nationally to questions associated with Goal 6.

"Please indicate the extent to which alcohol is a problem in your school."

| | Serious | Somewhat | Not At All |
|------------------------|----------------|-----------------|-------------------|
| All Teachers | 13% | 70% | 16% |
| PA Teachers | 26% | 61% | 13% |

"Please indicate the extent to which drugs other than alcohol are a problem in your school."

| | Serious | Somewhat | Not At All |
|------------------------|----------------|-----------------|-------------------|
| All Teachers | 7% | 43% | 50% |
| PA Teachers | 7% | 48% | 44% |

"Please indicate the extent to which violence against teachers is a problem in your school."

| | Serious | Somewhat | Not At All |
|------------------------|----------------|-----------------|-------------------|
| All Teachers | 1% | 15% | 84% |
| PA Teachers | 1% | 14% | 85% |

"Please indicate the extent to which violence against students is a problem in your school."

| | Serious | Somewhat | Not At All |
|------------------------|----------------|-----------------|-------------------|
| All Teachers | 3% | 35% | 56% |
| PA Teachers | 2% | 34% | 64% |

"Please indicate the extent to which disruptive behavior in the classroom is a problem in your school."

| | Serious | Somewhat | Not At All |
|------------------------|----------------|-----------------|-------------------|
| All Teachers | 16% | 76% | 14% |
| PA Teachers | 12% | 72% | 16% |

"Please indicate the extent to which absenteeism among students is a problem in your school."

| | Serious | Somewhat | Not At All |
|------------------------|----------------|-----------------|-------------------|
| All Teachers | 19% | 64% | 17% |
| PA Teachers | 18% | 63% | 18% |

Source: The Carnegie Foundation for the Advancement of Teaching

Summary and Conclusions

Goal 6 — Safe, Disciplined, and Drug-Free Schools

Available data for Goal 6, including student and teacher survey information on drug use and abuse, classroom violence, and issues relating to school climate and discipline, represent the weakest set of indicators toward progress of any of the National Goals. There is some cause for optimism in the comparisons of student surveys by the Governor's Drug Policy Council, which indicate significant progress in fighting the use and abuse of drugs by students. These data suggest that the various prevention and intervention strategies underway at state, local, and federal levels may be paying off. However, this optimism is tempered by the Centers for Disease Control survey and the Carnegie Foundation teacher survey, both of which suggest that problems continue to exist. The teacher surveys also suggest that issues such as violence in classrooms and the need for overall improvements in the school climate for learning continue to be of concern.

With the number and range of prevention strategies in place, solid data on progress toward Goal 6 regarding drug use and abuse should be forthcoming in the near future. More work must be done, however, to identify strategies and measures relating to safe and disciplined schools.

Current Efforts to Meet Goal 6

- **Student Assistance Programs** — All Pennsylvania school districts have implemented the Student Assistance Program, which identifies students with potential drug and alcohol problems, as well as mental health problems, and refers them to appropriate treatment services. This pioneer, school based intervention program also received funding from PENNFREE, Governor Casey's anti-drug initiative, which the White House singled out as a model for other states to follow. Pennsylvania Student Assistance Programs also received recognition from the American Medical Association who gave them a national award for their outstanding contribution to teenage health. Preliminary figures show that in 1990, more than 41,399 students were using the program.
- **Drug Free Schools** — All Pennsylvania school districts are participating in the federal Drug Free Schools and Communities program. For 1991-92, these school district will share more than \$16 million in federal money. Funds are allocated to school districts based on the number of students and also on the number of high risk students. Level of risk is determined by factors such as single-parent homes, families on welfare, income level, enrollment in a free lunch program, and the community crime rate and dropout rate.
- **Curriculum and Instruction** — Last year, Governor Casey signed into law Act 211, which requires that all students receive instruction on prevention of drug use and abuse in every grade level. The new law requires that there is a Student Assistance Program in every school district and that within five years, there is a drug and alcohol curriculum in every grade level. Currently in Pennsylvania, there is a drug and alcohol curriculum in every school district on the secondary level and in 204 districts on the elementary level. Within five years, the program will include grade K-12.
- **Drug Abuse Policies** — The Pennsylvania Department of Education requires that when a school district is involved in a Student Assistance Program, that policies be developed to prevent the use and abuse of drugs by students. The policies are required to provide logical consequences for drug abuse as well as treatment. The policy must cover situations ranging from suspected use to distribution.

Future Directions to Meet Goal 6

- **Student Assistance Program** — Extend to every public school building in Pennsylvania the Student Assistance Team concept, which provides support and referral to services for students with severe psychological problems.
- **Support Abuse Prevention Activities** — Support and/or institute school based programs and curricula which teach students non-violent solutions to conflict.
- **Improve Data Collection** — Strengthen ability to gather and report data which bear on safe, disciplined and drug-free schools.

PART III:

ROLES FOR FAMILIES, BUSINESSES AND COMMUNITIES

Roles for Families, Businesses, and Communities

To achieve the National Education Goals, it is important that families, businesses, and communities be active partners in the process. Individually and through coalitions much can be accomplished through the local support of educational success. Much of this is already happening across the state. There are many success stories of what local coalitions have done to provide better educational opportunities in their areas. The replication of their work should occur everywhere. Listed below are examples of roles for families, businesses, and communities which can help to achieve the National Education Goals.

Goal 1 — Readiness

- If you or a family member is pregnant, see a doctor as soon as possible so that your baby will have the best possible chance for good health.
- If you have questions about how to help your child develop learning skills so that he or she will be ready for school, contact your local school district, intermediate unit, or other child-oriented agency and ask for assistance.
- When seeking child care for your child, carefully question the provider about the types of activities, food and recreational facilities that are offered. Find out if the facility is licensed by the state. You have a right to answers. Don't hesitate to insist on them.
- Read to your child at least 15 minutes every day.
- **Roles for Businesses**
 - Conduct a survey of your employees to learn of their child care or other needs relating to small children.
 - Consider granting parental leave to new fathers and mothers so that they can spend important time with their newborn children.
 - Explore the possibility of offering benefits relating to the well being of employees' young children, such as on-site or accessible child care and preventative medical services and prenatal care instruction. Such child-oriented services can have the effect of improving morale and productivity on the part of employees with small children and increase the likelihood that the workforce of the next generation will be a capable one.

- **Roles for Communities**

- Conduct a community needs assessment to determine how well the needs of young children are being met. Are there adequate facilities for child care? Are there sufficient library books and programs to stimulate the interest of young children? Are the parks and recreation facilities designed to meet the needs of young children?
- Take responsibility for making your community a place where young children feel welcome, and are treated as valued members.

Goal 2 — School Completion

- **Roles for Families**

- Establish yourself as an interested and concerned parent. For example, get to know your children's teachers and principals, and let them know that you expect regular information and reports on how they are doing in school. Visit classes regularly, and schedule conferences with teachers on your children's progress.
- Ask your children what they are reading, and what they are working on at school. Ask them to explain their work to you. Talk to your children about what it was like when you were in school; what things are different and the same.
- Join the PTA or PTO organization in your school, and get involved in committees and special projects.
- Let your children know in every way you can that you value education and expect them to try hard and to do well.
- Take a course yourself to improve your job skills or basic literacy, or to learn more about something that interests you.

- **Roles for Businesses**

- Encourage employees to get involved in public school. Establish corporate policies which reward activities such as serving on school boards and school committees, and acting as mentors or as guest teachers/lecturers.
- If you employ students, ask them regularly how their studies are going. Ask to see their report cards, and condition any promotion or pay increase on maintaining good academic standing.
- Participate through staff and financial resources to the establishment or the maintenance of a local education fund or foundation to support innovative work of teachers and principals.
- Work with schools to establish work readiness programs to ensure that students understand what will be expected of them in terms of work habits and attitudes on the job.
- Convey in all ways possible that a student's most important "work" is to stay in school and to do well.
- Provide financial assistance packages, so-called "gap" funding, to create incentives for disadvantaged students to stay in school and have the opportunity to go on to postsecondary education or training.
- Support better and more accountable schools on the local, state, and national level.

- **Roles for Communities**

- Honor the first day of school as a time of celebration and high expectation of the community for its youth. Stage a special event to recognize the importance of going back to school.
- Use the school as a focal point for community activities and services, particularly programs for disadvantaged youth who might need them to succeed in school.

- Honor all graduates, not just those who are college bound, with special recognition such as newspaper features, letters from political and/or community leaders, parades, pizza parties, and any other ways which underscore the community's pride in their accomplishments.
- Sponsor regular community programs on education to assess how well the schools are meeting the needs of students. For example, bring in well known speakers, and invite panels of students, teachers, and administrators to discuss their views on how to improve schools.
- Operate a citizen service/volunteer bureau which can link citizens wanting to offer assistance to schools which can use the help.

Goal 3 — Student Achievement and Citizenship

- **Roles for Families**

- Recognize and reward your children's performance when you know they have done their best.
- Learn your children's academic strengths and weaknesses. Ask your children's teachers for advice on tutoring if it is needed. Encourage your children to tutor other children (children — as well as adults — often learn most effectively through explaining and/or demonstrating information and material to others).
- Explain to your children, in terms that they will understand, why it is important that they study hard and achieve at high levels. If they want to pursue certain career paths, if they want to earn a lot of money, if they want particular life styles, let them know that these goals are directly tied to how well they perform in school.
- Encourage your children to become involved in school and/or community service as a means to learning first hand the need for and the value of citizen action in a democratic society. Consider engaging in or expanding your own volunteer work to demonstrate your commitment to community service.

- **Rules for Businesses**

- Make temporary slots available in your corporate training programs for teachers and administrators. Work with school personnel to develop new in-service programs for teachers and administrators which borrow relevant aspects of corporate training and apply them to the work of the schools.
- Communicate directly with the schools and the community your expectations of students and, by implication, of the schools. What strengths must they possess for successful employment? What deficits occur at present?
- Work with the schools and community organizations to establish assessment strategies which will fairly monitor the progress of the schools over time in producing students who demonstrate high levels of academic competency.
- Strengthen cooperation with vocational schools to ensure that their programs are up-to-date and lead to the development of meaningful skills.
- Establish apprenticeship programs for high school students that would lead to full employment after high school graduation.

- **Roles for Communities**

- Stage community or town meetings to discuss what type of educational program your students need. Identify specific goals, and develop a plan to move towards them. Your goals might reflect the Pennsylvania Goals of Quality Education, the National Education Goals, and/or America 2000, or you might want to take an entirely different approach. The point is to wrestle with the issues of what quality schooling means in your community, and to make plans to make it happen.

- Celebrate the academic and service achievements of your students. Let them know, the same way you would a sports team, that high achievement in school and in the community are highly valued and worthy of visible, public praise.

Goal 4 — Mathematics and Science

Many of the roles and activities described in Goals 2 and 3 are applicable to Goal 4, as well.

- **Roles for Families**
 - Stress the importance of math and science to your children, particularly to girls, who tend to lose interest in both subjects during middle grades.
 - Identify positive role models among scientists and mathematicians, e.g., check out and read together biographies of Einstein, Curie, Galileo, and others whose accomplishments and life stories make for compelling reading.
 - Check out books of simple science experiments and perform them with your children. Encourage them to develop hypotheses, to test them, and to draw conclusions about what happens.
- **Roles for Businesses**
 - Work with your local schools to develop special programs stressing the importance of science and mathematics to your business. Urge your employees with skills in mathematics and science to volunteer their time, or give them release time, to visit the schools and make presentations to students.
 - Similarly, work with the schools to develop innovative in-service programs for teachers of math and the sciences, perhaps stressing industrial and other practical applications of these subjects as ways to heighten student interest.
 - Sponsor special competitive events relating to the applications of math and science, such as “Jeopardy” or “College Bowl,” math/science fairs, or special derbies or rallies with a science/math theme.
 - Award significant prizes to students who excel in math and science, based on standardized tests, on grade point average, or at fairs or other competitions.
- **Roles for Communities**
 - Sponsor community wide activities to highlight the importance of math/science achievement. Proclaim a math/science achievement day. Hold a special meeting of the county/city/borough/township officials to recognize student achievement in math and science.
 - Newspapers should include in their “kids pages” math-related activities and puzzles designed to stimulate interest in the school.

Goal 5 — Adult Literacy and Lifelong Learning

- **Roles for Families**
 - Stress to your children early and often the importance of preparing themselves for work and/or additional education after completing high school. Help them to sort out their feelings about what they want to do, help them to make plans so that they will be able to meet their goals.
 - Ask local school officials if your school is participating in partnership arrangements with local businesses. If not, encourage them to do so and volunteer to help put a partnership in place.
 - Upgrade your own employment skills. You will be more marketable, and your children will benefit from your example.
 - Volunteer to teach a course in an adult enrichment program.

- **Roles for Businesses**

- Approach school districts in your areas of operation and offer to work towards a meaningful partnership. If you have an existing partnership program, re-examine it to be sure that it meets your goals. Consider expanding the scope of your current efforts to activities which will stimulate higher achievement for all students.
- Work with your business colleagues and representatives of the education community to form a local education fund or foundation.
- Consider a compact arrangement with your local schools, in which you pledge to hire certain numbers of students or provide other support to the schools in exchange for a pledge to make specific improvements in areas such as dropout prevention, test scores, going to college rates, and meaningful job placements.
- Encourage your employees to undertake additional education and training. Support, perhaps on a matching basis, employees who seek additional education and training opportunities.
- Sponsor voluntary, non-threatening workforce literacy programs for your employees who have low literacy levels.
- Reward employees involved in community programs through special recognition dinners or mention in company newsletter.

- **Roles for Communities**

- Establish your community as a “community of students”, one where adult learning is valued, sought, and provided. Hold regular events to highlight education and training opportunities in or near your community.
- Undertake a campaign to improve literacy levels in your community: establish or expand literacy programs; hold “read-ins” and other events to stimulate interest in reading; establish a hotline for information and referral to literacy services; and create a climate which is non-threatening and encouraging for low literate citizens to improve their skills.

Goal 6 — Safe, Disciplined, and Drug-Free Schools

- **Roles and Families**

- Instill in your children, through your words and in the ways that you approach discipline and related issues, an appreciation for non-violent resolutions to conflict and problem-solving.
- Learn specific steps and approaches to solving problems and dealing with conflict which stress mediation and other non-violent strategies, and teach them to your children.
- From the outset, help your children develop a sense of self-worth and confidence in themselves. Help them to have the strength of character to resist pressure to participate in substance abuse.
- Learn about the effects of alcohol and popular illegal drugs, how they work and what they do to your body. Explain to your children in terms they can understand relate to how damaging these effects can be.
- Learn and explain to your children the legal consequences of drug and alcohol abuse, e.g. loss of driver's license, fines and imprisonment, as well as loss of access to many career opportunities.
- Try to establish an open and honest relationship with your children which will allow and encourage discussion and communication about sensitive issues such as alcohol and drug abuse.

- **Roles and Businesses**
 - Fund public awareness campaigns targeted at students which counter drug use and abuse. Work with school and community officials to determine the best approaches.
 - Offer assistance to employees whose children are suffering from substance abuse, or who might be substance abusers themselves.
- **Roles for Communities**
 - Organize action-oriented groups and task forces, along the lines of MADD (Mothers Against Drunk Driving) and SADD (Students Against Drunk Driving), which focus continued attention on issues of drug and alcohol abuse.
 - Provide structured yet attractive activities for students to engage in socializing and recreation in supervised settings.
 - Work with schools to put in place expansive programs of community service for youth, designed to provide a positive outlet for energy and creativity, and to cultivate a sense of self worth and the importance of making a contribution to one's community.

APPENDIX:



PUBLIC EDUCATION GOVERNANCE IN PENNSYLVANIA

PUBLIC EDUCATION GOVERNANCE

In order to become involved in the educational system, it is necessary to understand the structure behind its operation. The purpose of this section is to provide an overview of public education governance in Pennsylvania. This will enable citizens to better understand the system and get involved to make it better.

Overview

Responsibility for public education is shared among a number of individuals and institutions at the state and local levels. Under the Pennsylvania Constitution, providing for public education is the responsibility of the state. The Public School Code contains the body of laws and specifications which establish and govern the public education system. The Governor and the Pennsylvania General Assembly (the House and Senate) agree each year on the amount of money which the schools will receive. The Pennsylvania State Board of Education writes rules which establish general policies within which local schools and postsecondary institutions must operate. The Department of Education allocates funds provided by the Governor and the General Assembly and assists schools and higher education institutions. Most of the decisions relating to the direct management and operation of public schools in Pennsylvania is often described as a state with strong local governance of education. Following is a brief description of the individuals and groups which have key responsibilities for education governance in Pennsylvania.

The Governor

As chief elected officials of the Commonwealth of Pennsylvania, the Governor annually submits his budget request to the Pennsylvania General Assembly, which includes significant funding support for public schools and postsecondary education institutions. The Governor appoints, with approval of the Pennsylvania Senate, the Secretary of Education and the Pennsylvania State Board of Education. Further, the Governor proposes legislation to improve the quality of education offered in the Commonwealth.

The Pennsylvania General Assembly

The General Assembly, pursuant to the Pennsylvania Constitution, has the responsibility to provide for the "maintenance and support of a thorough and efficient system of public education to serve the needs of the Commonwealth." In pursuit of this mandate, the General Assembly annually adopts a budget which provides for funding for public schools and postsecondary education institutions, and considers and adopts proposed legislation relating to education. Further, to carry out the duties associated with the provision of a "thorough and efficient system of public education," the General Assembly authorized the Department of Education to administer school laws and to assist school districts in conducting their educational programs.

The Secretary of Education

The Secretary of Education is the chief administrator of the Department of Education. Appointed by the Governor and confirmed by the Senate, the Secretary oversees Offices of Elementary and Secondary Education, Postsecondary and Higher Education and the State Library. The Secretary also serves as chief executive officer of the State Board of Education.

The Department of Education

The Department of Education is the state-level agency responsible for administering the school laws of Pennsylvania. Further, it administers the rules and regulations of the State Board of Education; assists with local educational programs; allocates to local school districts funds appropriated by the General Assembly; promotes the establishment of community colleges and provides other services to institutions of higher education; licenses and regulates private schools; collects and publishes information about education in Pennsylvania; and administers state programs for libraries.

The State Board of Education

The State Board adopts regulations and policies for basic and higher education. The Board has 17 members appointed by the Governor and confirmed by the Senate for terms of six years. The Board also includes four Board members who serve by virtue of their positions as majority and minority chairs of the House and Senate Education Committees as well as the chair of the Professional Standards and Practices Commission. The Board has the power and duty to review and adopt regulations and to establish standards governing the educational programs of the Commonwealth.

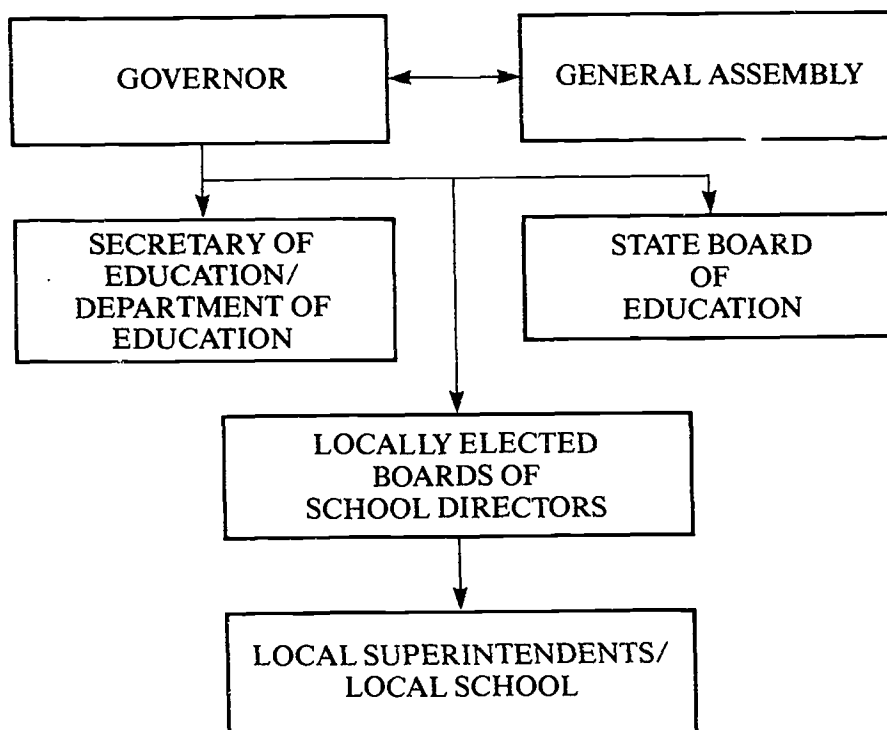
Boards of Local School Directors

Pennsylvania has 501 local school districts. Each of them is overseen by nine local school directors elected by the people of the district (with the exception of Philadelphia, where the Board is appointed by the mayor). School boards are units of local government and have the authority to set all policies of the district within the framework of state and federal law. They are responsible for, among other things, adopting courses of study for students; establishing the length of the school term; adopting textbooks; selecting the superintendent and hiring other employees; entering into contracts with professional employees and into collective bargaining agreements; adopting annual budgets; and levying taxes.

Superintendents of Schools

Each school district is administered by a superintendent of schools. Selected by the school board to implement its policies and procedures, the superintendent is the professional education leader of the district, and is responsible for ensuring that the schools function effectively and efficiently within the parameters established by the General Assembly, the State Board, and the local school board.

EDUCATION GOVERNANCE



For more information on the roles and responsibilities of these individuals and institutions, please contact:

For the Executive Branch:

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For Superintendents of Public Schools:

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For the State Board of Education:

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